Massachusetts Department of Transportation

Massachusetts Travel Survey

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Massachusetts Travel Survey
2010 - 2011

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All available report documents can be accessed on the MassDOT web site at:

www.mass.gov/massdot/travelsurvey

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Executive Summary

The Massachusetts Department of Transportation (MassDOT) and the Commonwealth's metropolitan planning organizations (MPOs) contracted with NuStats to conduct the Massachusetts Travel Survey (MTS), a comprehensive study of the demographic and travel behavior characteristics of residents within the Commonwealth of Massachusetts. The survey data obtained through this effort will provide substantially updated information on travel and mobility patterns, enable updates for state and regional travel demand models, and ultimately assist planners and decision makers in better understanding the needs of the traveling public – all of which will support making the best investments in transportation.

The MTS targets included demographic and trip data collected from a minimum of 15,000 households, including a sub-sample of at least 500 households that would also provide global positioning system (GPS) data. As summarized in Table 1, the data collection goal was met. The final data set contains information for 15,033 households, of which 611 households also provided GPS data. The project was conducted by NuStats, in association with GeoStats, with a portion of the Computer-Assisted-Telephone-Interviewing conducted by Wilkins Research Services.

Table 1: Overall Completed Survey Summary

MPO (with associated regional planning commission)	Retrieval Target	Recruits	Retrievals	% of Target	Retrieval Rate
Boston MPO (MAPC)	7,200	12,688	7,661	106.4%	60.4%
Southeastern Massachusetts MPO (SRPEDD)	1,400	2,120	1,181	84.4%	55.7%
Pioneer Valley MPO (PVPC)	1,400	2,537	1,488	106.3%	58.7%
Central Massachusetts MPO (CMRPC)	1,200	1,956	1,148	95.7%	58.7%
Old Colony MPO (OCPC)	725	1,048	554	76.4%	52.9%
Merrimack Valley MPO (MVPC)	725	1,304	711	98.1%	54.5%
Northern Middlesex MPO (NMCOG)	625	1,081	640	102.4%	59.2%
Cape Cod MPO (CCC)	600	788	498	83.0%	63.2%
Montachusett MPO (MRPC)	525	855	529	100.8%	61.9%
Berkshire MPO (BRPC)	300	490	303	101.0%	61.8%
Franklin Transportation Planning Organization (FRCOG)	200	372	262	131.0%	70.4%
Martha's Vineyard MPO (MVC)	50	48	35	70.0%	72.9%
Nantucket MPO (NPEDC)	50	44	23	46.0%	52.7%
Statewide Total	15,000	25,331	15,033	100.2%	59.3%

The survey design employed a generally accepted research method for household travel surveys that included a subsample of households equipped with global positioning system (GPS) equipment to provide an independent measure of travel. Household members (age 14 and older) recorded all trips for a specified 24-hour period using a specially designed diary. After an in-depth review of data needs, a specific set of data elements aimed at collecting household level, person level, and trip level data were identified. The final questionnaire was administered by telephone or mail.

A stratified sampling approach was used where the survey universe was divided into smaller groups and a random sample was chosen within each group. The approach allowed NuStats to oversample at the certain geographic and demographic strata to capture the diversity of the population according to specific factors affecting travel behavior in the study area, while meeting the MPO distribution goals.

The pretest, designed to test the materials, processes, and procedures for the full study, was conducted from September to December 2009 and included sample from each MPO in the study area. In total, demographic and travel data were collected and completed for 574 households. The results of the pretest provided information used to refine the survey procedures, programs, and materials.

Data collection activities for the full-study began in May 2010 and continued through October 2011, with a break during the summer, and included seven main stages; (1) advance notification, (2) reminder postcard, (3) recruitment, (4) placement of materials, (5) reminder call, (6) travel data retrieval, (7) data processing. Sampled households were initially contact by an advance letter that introduced the household to the survey and invited them to participate in the recruitment survey, either by phone or mail, where key household and person level information was collected.

A total of 25,331 households were recruited for the full study. Once a GPS household was recruited, GeoStats managed the deployment and recovery of the GPS devices as well as the GPS data processing. All recruited households, including those participating in the GPS portion of the survey, were then mailed personalized diaries to report their travel for an assigned 24-hour period. NuStats retrieved the travel information by mail (52.5 percent) or by telephone (47.5 percent).

Once retrieved, household travel details were processed, and then subjected to quality control checks. Data Processing took place on a daily basis throughout the study, beginning with the release of sample for recruitment, to processing recruitment data for the respondent mailout, to appending the retrieval data to the master tables, and to performing initial quality control measures on the data. All trip-ends and habitual addresses were geocoded during the retrieval through the TripTracer software.

Results

General

- Achieved 15,033 completed households with an overall recruitment rate of 58.4 percent and retrieval rate[1] of 59.3 percent. These households yielded information for 37,023 persons, 26,488 vehicles, and 190,215 places.
- The average interview length for recruitment was (17.1 minutes); the retrieval interview averaged 28.1 minutes.
- Travel days were evenly distributed among each weekday: Monday (20.1 percent), Tuesday (20.1 percent), Wednesday (20.0 percent), Thursday (19.4 percent), and Friday (20.2 percent).

Person Data (n = 37,023)

- Twenty-nine percent of respondents were aged 35 to 54 years of age; forty-five percent were younger than 35 years of age.
- Thirty-eight percent of respondents reported being unemployed.
- Workers in the study area average 1.11 jobs each.
- Eighty-five percent of respondents reported having a valid driver's license.
- Twenty-nine percent of respondents reported being a student.

Household Data (n = 15,033)

- The average household size is 2.5 household members.
- On average, households reported 1.8 vehicles, with 37.1 percent of households reporting two vehicles and 35.7 percent of household reporting one vehicle.

[1] Total number of retrieved households divided by the total number of recruited households

- Households reported having an average of 1.3 household workers. Zero-worker households constituted 25.5 percent, one-worker households constituted 36.4 percent, and two-person households constituted 30.2 percent.
- The average household income category with the highest percentage of respondents (16.4 percent) was between $50,000 and $74,999.

Place Data (n = 190,215)

- Households reported an average of 10.2 daily household trips and 4.1 daily person trips.
- Sixty-nine percent of all trips were made by automobile, either as the driver or passenger.
- The non-motorized transportation mode for all trips included walk (19 percent) and bike (1.1 percent).
- Transit transportation mode for all trips included Public Bus (3.6 percent), Train (4.0 percent), and Ferry/Boat (0.1 percent).

Survey Methods

Objectives and Approach

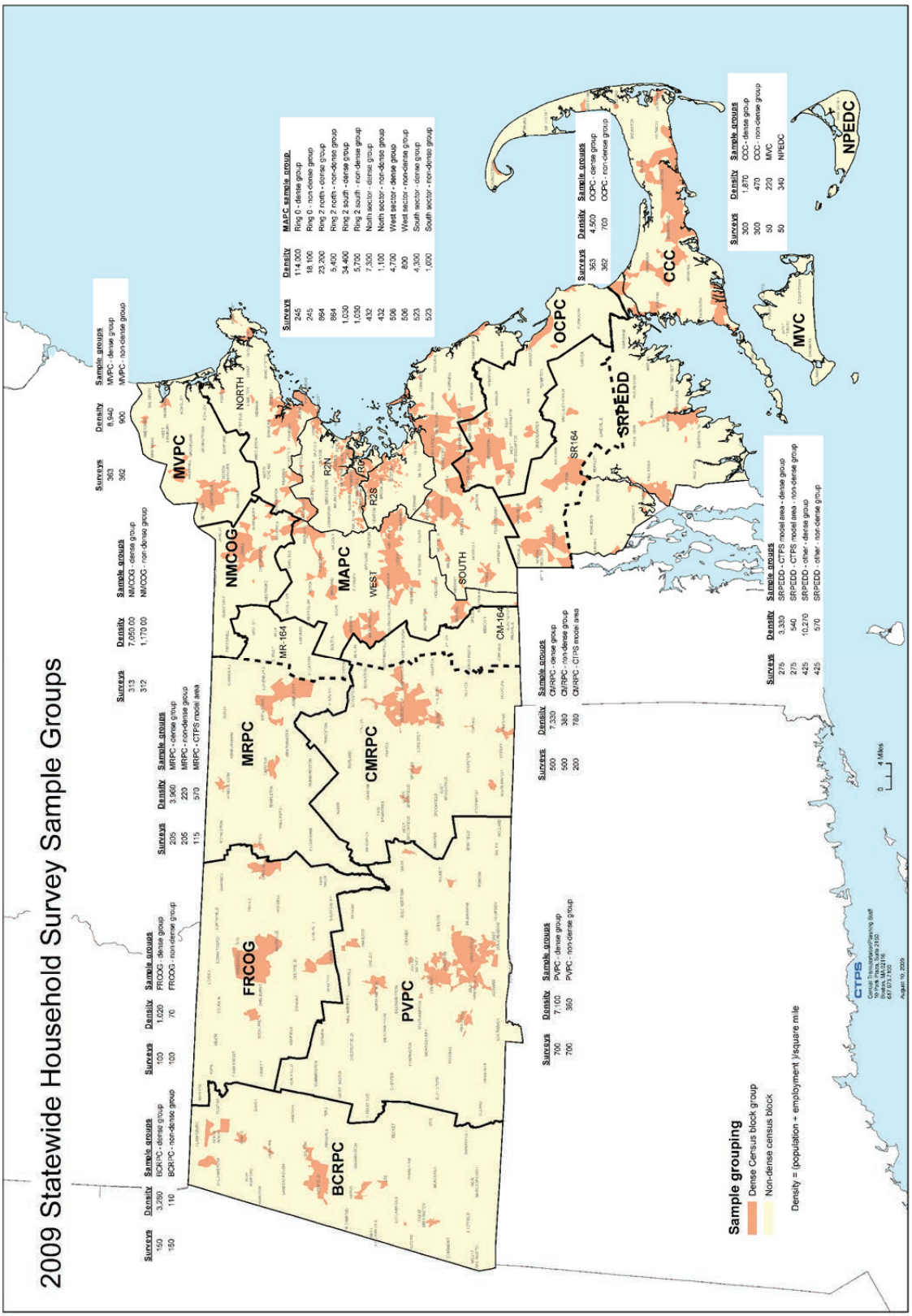
The Massachusetts Travel Survey (MTS) is a comprehensive study of the demographic and travel behavior characteristics of residents of the Commonwealth of Massachusetts. Sponsored by MassDOT and the Commonwealth's MPOs, the survey data obtained through this effort will support updates for travel demand models and assist public decision-makers in better understanding how well the transportation system is functioning under the demands placed upon it.

The MTS had three phases: design, pretest, and full study data collection. The design phase took place in early 2009 and included the development of the work plan and sampling plan, the identification of data elements, materials design, and database programming. The pretest effort took place between September and December 2009 and served as a dress rehearsal of all processes required of the full study. A survey of non-respondents was conducted following the pretest to help inform the design of the survey materials for the full study. The full study data collection effort took place from June 2010 and concluded in November 2011. The study area is presented in Figure 1 on the next page.

The project design called for a traditional household travel survey with a subsample of households equipped with global positioning system (GPS) equipment to provide an independent measure of travel. Sampled households were contacted by telephone to secure their participation in the study; then they were mailed personalized diaries to report their travel for an assigned 24-hour period. Their travel details were retrieved by telephone, processed, and then subjected to standard quality control checks. The GPS subsample followed the same protocol: they were also contacted by telephone to secure their participation, they received their diaries and GPS units via mail, and then they reported their travel details by phone while they mailed back their GPS units. A subsequent review of the GPS data included a comparison of what was reported by telephone versus what trips were detected in the GPS data streams. Following quality control checks and the compilation of the final dataset, weighting factors were created to adjust the data with regard to geographic and demographic distribution.

This section of the report provides details about the methodology used to conduct the survey through the stages described above. It concludes with documentation on the development of the weights for use with the final dataset. Within each section, the methods used, as well as the outcomes from those methods, are discussed.

Figure 1: Household Travel Survey Study Area



Survey Design

The goal of the study was to collect data from a minimum of 15,000 regional households. Demographic information (obtained during the recruitment interview) and detailed travel information (obtained during the retrieval interview) were collected for all household members. The final dataset contains demographic and trip information for 15,033 households.

The survey employed a generally accepted research method for household travel behavior research, in which household members age 14 and older recorded all trips for a specified 24-hour period (from 3:00 a.m. to 2:59 a.m.) using a specially designed travel diary. Travel for children younger than 14 were collected via proxy reporting from an adult in the household. In the survey materials and interview scripts, respondents were assured that their responses would be kept confidential and that their responses would be analyzed in the aggregate only. As a result, the data files were structured such that a 7-digit unique identifier ("sample number") would be used to link each household's data together and documentation prepared to ensure the public use data files would be stripped of all identifying information prior to its release. Households were randomly assigned to non-Federal Holiday weekdays for recording their travel (Monday–Friday). The final distribution of households by day of week is shown in Table 2, which shows roughly equal distribution of completed households among the days of the week.

Table 2: Distribution of Households by Day of Week

Day of Week	Frequency	Percent
Monday	3040	20.2%
Tuesday	3029	20.1%
Wednesday	3005	20.0%
Thursday	2919	19.4%
Friday	3040	20.2%
Total	15033	100.0%

The study began with an in-depth review of data needs that would satisfy the modeling requirements and analysis plans that would be relying on the survey data. This resulted in the identification of the following data items identified in Table 3, listed in order of their appearance in each data file.

Table 3: Data Items in Household, Person, Vehicle and Travel/Location Files

Household Level	Person Level	Vehicle Level	Trip Level
GPS Participation Status	Gender	Year	Primary Trip Purpose
NRFU Flag	Age	Make	Secondary Trip Purpose
Advance Letter Sent	Age Category	Model	Mode of Trip
Retrieval Mode	Driver License Status	Body Type	Total Traveling in Travel Party
Area of Residence	Has Transit Pass	Fuel Type	Household Members on Trip
MPO of Residence	Type of Transit Pass (Multiple Response)	Main User of Vehicle	Non-Household Members on Trip
County of Residence	Employment Status	Vehicle Used on Travel Day	Vehicle Number used on Trip

Household Level	Person Level	Vehicle Level	Trip Level
Travel Date	Unemployment Status	Reason Vehicle not Used	Parking Location
Travel Day of Week	Hours Worked per Day		Location of Where Person Parked
Transit Use on Regular Basis	Work Name		Paid to Park
Household Size	Days Worked per Week		Parking Cost/Unit
Household Bicycles	Typical Mode to Work		Amount Paid out of Pocket
Household Vehicles	Transit Service Used to Travel to Work		Toll Road Used
Hispanic or Latino Status	Telecommute		Which Toll Road Used
Ethnicity	Flexible Work Schedule		Entrance to Toll Road
Residence Type	Flexible Programs Offered		Exit from Toll Road
Home Ownership Status	Participation in Flex Programs		Toll Road Amount
Number of Cell Phones	Disabled License Plate		HOV Lane Use
Number of Landline Phone Lines	Disabled Transit Registration		Transit Mode Type
Number of Dedicated Fax Lines	Level of Education Completed		Fare Paid
Household Income	Student Enrollment		Transit Route Used
Willing to Participate in Future Studies	Full or Part-Time Student		Arrival Hour/Minute
Household Trips	Student Grade Level		Departure Hour/Minute
Household Workers	School Name		Trip Duration
Household Students	Typical Mode to School		Activity Duration
Number of Licensed Drivers in Household	Transit Service Used to Travel to School		Place Name
Home Address	Transit Trips in Past Week		Place Address
Home X/Y Coordinates	Bike Facilities Available at Work/School		Place X/Y Coordinates
	Days Used Bike for Recreation last week		
	Days Used Bike for Transportation last week		
	Bike Trails and Lanes Used		
	Internet Used in Place of Trips on Travel Day		
	Person Trips		
	Completed Travel Log		
	Interviewed in Person		
	Household Member Serving as Proxy		
	Travel Day Typical		
	Travel Activities Planned in Advance		
	Reason for No Travel		
	Work Address		
	Work X/Y Coordinates		
	School Address		
	School X/Y Coordinates		

Sample Design

Equally important as the decision of what to obtain during the survey is from whom to obtain that data. The objective was to provide a dataset representative of the region's population and travel patterns. As such, the sample design for the study needed to guide the collection of data such that the resultant dataset would include adequate representation of households by geography, as well as the key demographics of household size and household vehicles.

This section discusses the sample design used for the full study. The key issues considered while developing the sampling plan were identification of the survey universe, selection of the sampling frame(s), selection of the sampling method, and calculation of the sample size. The following subsections discuss these key issues in detail, including: (1) Survey Universe, (2) Sampling Frame, (3) Sample Method, (4) Stratification Scheme, and (5) Sample size.

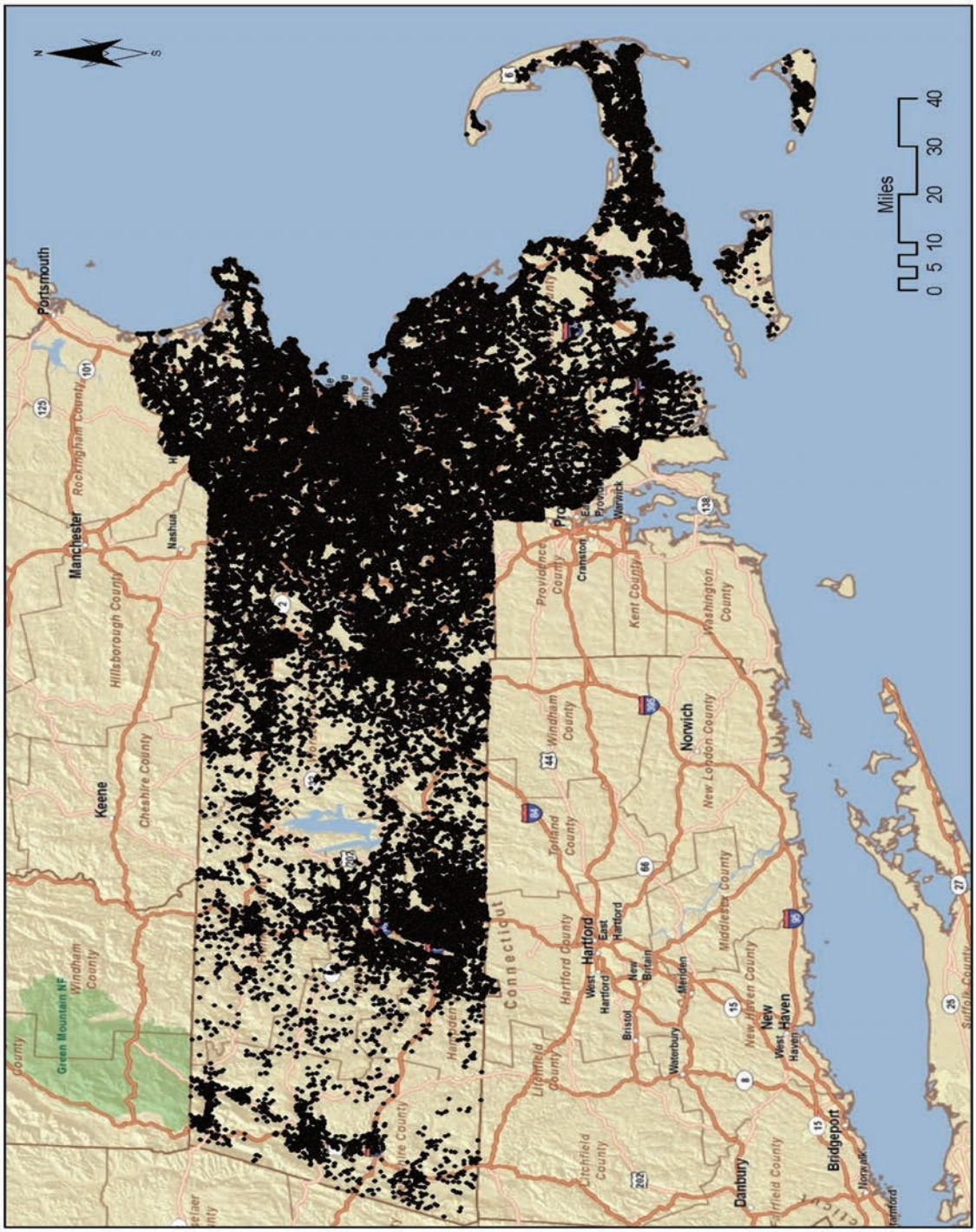
Sampling Plan Goals and Survey Universe

The survey population represents all households residing in the thirteen MPO regions in the Commonwealth of Massachusetts (see Figure 2). The population, or the study universe, comprises 2,547,075 households. Table 4 provides the distribution of households by MPO region. The goal was to obtain travel data from over 15,000 households.

Table 4: Distribution of Households in Study Area

MPO Region	2010 Census	
	All Households	Percent of All Households
Boston MPO (MAPC)	1,226,596	48.2%
Southeastern Massachusetts MPO (SRPEDD)	240,223	9.4%
Pioneer Valley MPO (PVPC)	238,629	9.4%
Central Massachusetts MPO (CMRPC)	210,870	8.3%
Old Colony MPO (OCPC)	119,437	4.7%
Merrimack Valley MPO (MVPC)	123,577	4.9%
Northern Middlesex MPO (NMCOG)	104,022	4.1%
Cape Cod MPO (CCC)	95,755	3.8%
Montachusett MPO (MRPC)	89,816	3.5%
Berkshire MPO (BRPC)	56,091	2.2%
Franklin Transportation Planning Organization (FRCOG)	30,462	1.2%
Martha's Vineyard MPO (MVC)	7,368	0.3%
Nantucket MPO (NPEDC)	4,229	0.2%
Statewide Total	2,547,075	100.0%

Figure 2: Sampled Household Locations (Map of Massachusetts)



Sampling Frame

A dual sampling frame approach was used that combines the strengths of two sampling frames—Address-based frame and Listed Residential frame. An address-based frame includes all residential addresses that receive U.S. Mail delivery. Its main advantage is its reach into population groups that typically participate at lower-than-average levels, largely due to coverage bias (such as households with no phones or cell phone-only households). For efficiency of data collection, the addresses were matched to telephone numbers and had a listed name of the household appended to it. Addresses were generated and matched by MSG, a third-party vendor. This sampling frame ensured coverage of all types of households irrespective of their telephone ownership status, including households with no telephones (estimated at less than 3 percent of households in the U.S.).

The Listed Residential frame, on the other hand, included listed telephone numbers from working blocks of numbers in the U.S. for which the name and address associated with the telephone number are known. The Listed Residential frame was used to strengthen the coverage of households with listed landlines. The advantage of drawing sample from this frame is its efficiency in conducting the survey effort—being able to directly reach households and secure their participation in the survey in a direct and active approach.

Based on findings from the pretest, appropriate targeted samples were drawn from the dual sampling frames to capture the following hard-to-reach populations groups.

- Large Households: Listed large household sample and young household sample
- Low-income Households: Listed low-income sample
- Young Households: Listed young household sample
- 1-person Worker Households: Listed 1-person earning more than $50,000 annually
- Hispanic Households: Listed Hispanic Surname sample
- African-American Households: Listed African American sample
- New Residents to the study area: Listed New Mover sample
- High Probability Zero-vehicle Households: Listed low-income sample
- Transit Using Households: Listed and Unmatched sample pulled from census tracts with dense populations and near transit

The sample was procured from the sample provider, Marketing Systems Group (MSG), based in Fort Washington, PA. Using Census data, census tracts/blocks are identified having higher than average percentages of households bearing the target characteristics. Because the sample frame is addressed-based, households are randomly selected from these targeted areas. Although there is no guarantee that each household within these targeted areas will actually have the targeted characteristic(s), it does increase the likelihood more than a pure random sample of the study area households.

Sample Method

The selection of an appropriate sampling method is critical for an effective sample design that guards against unplanned selectiveness and produces a robust dataset that is representative of the population. To ensure adequate representation, a sample needs to be drawn scientifically so that each person in the population has a measurable chance of selection. This way, the results can be reliably projected from the sample to the larger population with known levels of certainty and precision.

In this study, we employed a stratified probability sample of households. Stratified sampling is a type of random or probability sampling, the methods of which are well grounded in statistical theory and the theory of probability. Specifically, stratified sampling is a probability sampling method where the survey universe is divided into smaller groups and a random sample is chosen within each group (i.e., every

sampling unit has some non-zero probability of being selected into the sample). This method resulted in oversampling for some strata to ensure we captured the diversity of the population according to specific factors affecting travel behavior in the study area. Thus, within strata, households were selected randomly (i.e., with equal probabilities), but the combined sample (across strata) comprised an unequal probability sample of households.

Stratification Scheme

Based on the recommendations provided by the MPO regions in the study area, we used a geographic stratification scheme that ensured adequate representation of households by MPO regions and municipal density groups. The sample was drawn proportionate to the distribution of households by the geographic strata. The percent of households within the study area (2008 ACS) is compared with the final dataset (MTS) in Table 5.

Table 5: Distribution of MPO Density Stratification

MPO Region	Density Group	2008 ACS	Massachusetts Travel Survey (MTS)
Boston MPO – Ring 0	Dense	1.6%	1.6%
	Non-Dense	1.6%	1.8%
Boston MPO – Ring 2 north	Dense	5.8%	5.8%
	Non-Dense	5.8%	5.9%
Boston MPO – Ring 2 south	Dense	6.9%	6.7%
	Non-Dense	6.9%	7.0%
Boston MPO – North sector	Dense	2.9%	2.9%
	Non-Dense	2.9%	2.8%
Boston MPO – West sector	Dense	3.4%	4.4%
	Non-Dense	3.4%	4.9%
Boston MPO – South sector	Dense	3.5%	3.6%
	Non-Dense	3.5%	3.6%
Merrimack Valley MPO (MVPC)	Dense	2.4%	2.0%
	Non-Dense	2.4%	2.7%
Northern Middlesex MPO (NMCOG)	Dense	2.1%	1.6%
	Non-Dense	2.1%	2.6%
Montachusett MPO (MRPC)	Dense	1.4%	1.4%
	Non-Dense	1.4%	1.3%
	CTPS model area	0.8%	0.9%
Franklin Transportation Planning Organization (FRCOG)	Dense	0.7%	1.0%
	Non-Dense	0.7%	0.8%
Berkshire MPO (BRPC)	Dense	1.0%	1.1%
	Non-Dense	1.0%	1.0%
Pioneer Valley MPO (PVPC)	Dense	4.7%	4.7%
	Non-Dense	4.7%	5.2%
Central Massachusetts MPO (CMRPC)	Dense	3.3%	3.0%
	Non-Dense	3.3%	3.2%
	CTPS model area	1.3%	1.5%
Southeastern Massachusetts MPO (SRPEDD) - CTPS model area	Dense	1.8%	1.7%
	Non-Dense	1.8%	1.6%
Southeastern Massachusetts MPO (SRPEDD) – Other	Dense	2.8%	2.3%
	Non-Dense	2.8%	2.3%
Cape Cod MPO (CCC)	Dense	2.0%	1.6%

MPO Region	Density Group	2008 ACS	Massachusetts Travel Survey (MTS)
	Non-Dense	2.0%	1.7%
Martha's Vineyard MPO (MVC)		0.3%	0.2%
Nantucket MPO (NPEDC)		0.3%	0.2%
Old Colony MPO (OCPC)	Dense	2.4%	1.7%
	Non-Dense	2.4%	2.0%
Statewide Total		100.0%	100.0%

We also used a demographic stratification to set demographic controls and monitor the performance of the sample against these controls. In particular, the study area was stratified by household size, number of workers, and vehicle ownership, translating to 37 demographic cells formed by the cross-tabulation of the three key variables with the following categories.

- Household size – one-person, two-person, three-person, four-person, and five-or-more persons
- Number of workers – zero, one, two, and three-or-more workers
- Vehicle ownership – zero, one, two, and three-or-more vehicles.

Table 6 presents the census distribution of the households in the study area by the 37 demographic cells using 2008 American Community Survey (ACS) data. The table also presents the distribution of completed surveys by demographic stratification.

Table 6: Stratification Scheme

Household Size	Number of Workers	Vehicle Ownership	ACS 2008		Survey Results	
			Count	Percent	Count	Percent
1-person	0	0	102,405	4.2%	756	5.03%
		1	132,839	5.4%	1257	8.36%
		2 or more	2,382	0.5%	116	0.77%
	1	1 or less	428,620	17.4%	1792	11.92%
		2	42,403	1.7%	149	0.99%
		3 or more	1,710	0.5%	53	0.35%
2-person	0	0	2,846	0.5%	146	0.97%
		1	48,928	2.0%	365	2.43%
		2 or more	42,913	1.7%	621	4.13%
	1	1 or less	102,452	4.2%	535	3.56%
		2	81,776	3.3%	813	5.41%
		3 or more	13,212	0.5%	222	1.48%
	2	2 or less	430,272	17.4%	1702	11.32%
		3 or more	49,704	2.0%	425	2.83%
3-person	0	1 or less	8,456	0.3%	107	0.71%
		2 or more	2,418	0.1%	74	0.49%
	1	1 or less	7,084	1.9%	255	1.70%
		2	18,416	0.7%	298	1.98%
		3 or more	6,943	0.3%	147	0.98%
	2	2 or less	160,012	6.5%	787	5.24%
		3 or more	34,929	1.4%	405	2.69%
	3	All	116,748	4.7%	465	3.09%

Household Size	Number of Workers	Vehicle Ownership	ACS 2008		Survey Results	
			Count	Percent	Count	Percent
4-person	0	All	5,400	0.2%	65	0.43%
	1	0	5,326	0.2%	20	0.13%
		1	18,077	0.7%	111	0.74%
		2 or more	25,863	1.0%	502	3.34%
	2	2 or less	169,837	6.9%	968	6.44%
		3 or more	26,802	1.1%	315	2.10%
	3+	1 or less	11,673	0.5%	15	0.10%
		2 or more	96,911	3.9%	428	2.85%
5+person	0	All	1,535	0.1%	33	0.22%
	1	2 or less	25,318	1.0%	279	1.86%
		3 or more	3,021	0.1%	62	0.41%
	2	1 or less	15,064	0.6%	47	0.31%
		2	49,182	2.0%	299	1.99%
		3 or more	17,384	0.7%	147	0.98%
	3+	All	88,468	3.6%	252	1.68%
Total			2,467,329	100.0%	15033	100.00%

The geographic and demographic distributions of participating households were monitored on a regular basis, and areas/demographic cells that were underrepresented were targeted during the course of the full study, as and when needed. In order to facilitate this, the sample was ordered in several waves. The first sample order included a disproportionate draw of sample from the two frames wherein targeted samples were drawn from the frames with higher oversampling percentages. The oversampling percentages used in the pretest were revised to reflect the observed percentages needed to meet the geographic and demographic goals.

Sample Size

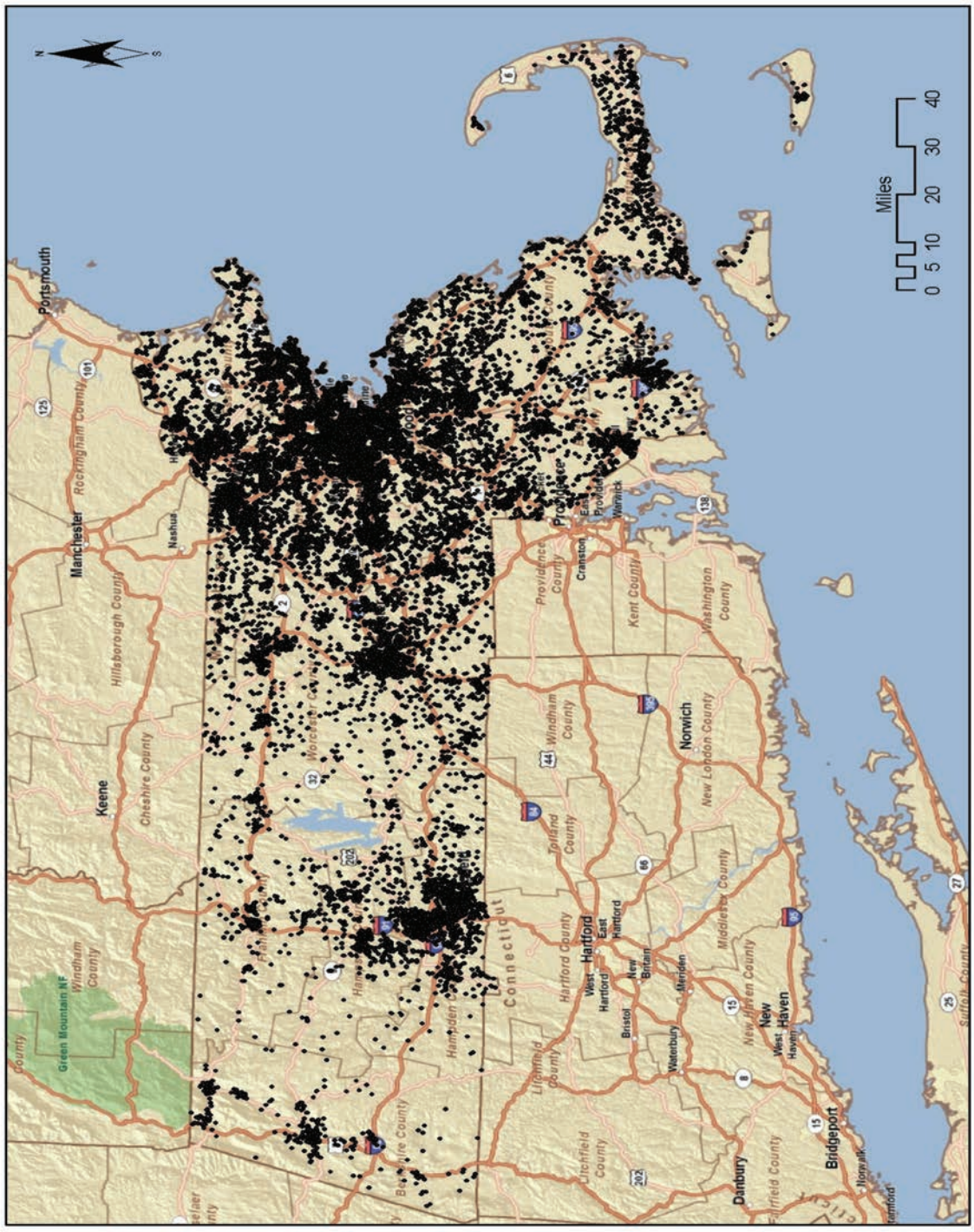
The expected sample size for the full study was 15,000 completed surveys. NuStats recruited 25,331 households and retrieved information from 15,033 households. Table 7 shows expected and completed surveys by MPO of residence, with recruitment and retrieval rates.

Table 7: Distribution of Participating Households by MPO

MPO Region	Recruited Households	Recruitment Rate	Retrieved Households	Retrieval Rate	All Households (2010 Census)
Boston MPO (MAPC)	12688	60.1%	7661	60.4%	48.2%
Southeastern Massachusetts MPO (SRPEDD)	2120	55.6%	1181	55.7%	9.4%
Pioneer Valley MPO (PVPC)	2537	58.5%	1488	58.7%	9.4%
Central Massachusetts MPO (CMRPC)	1956	58.5%	1148	58.7%	8.3%
Old Colony MPO (OCPC)	1048	52.5%	554	52.9%	4.7%
Merrimack Valley MPO (MVPC)	1304	54.4%	711	54.5%	4.9%
Northern Middlesex MPO (NMCOG)	1081	59.0%	640	59.2%	4.1%
Cape Cod MPO (CCC)	788	63.0%	498	63.2%	3.8%
Montachusett MPO (MRPC)	855	61.7%	529	61.9%	3.5%
Berkshire MPO (BRPC)	490	61.4%	303	61.8%	2.2%
Franklin Transportation Planning Organization (FRCOG)	372	70.2%	262	70.4%	1.2%
Martha's Vineyard MPO (MVC)	48	72.9%	35	72.9%	0.3%
Nantucket MPO (NPEDC)	44	52.3%	23	52.3%	0.2%
Statewide Total	25331	58.4%	15033	59.3%	100.0%

The locations of all recruited households are shown in Figure 3.

Figure 3: Recruitment Household Locations (Map of Massachusetts)



Effect of Multi-Modal Data Collection on Sampling

Multi-modal data collection does not have significant consideration in sampling. For recruitment, Computer-Assisted Telephone Interviewing (CATI) was available for data collection. For retrieval, CATI and mail-back options were available. Multi-modal data collection helps reach a diversified, and representative, sample not possible though one survey mode. For example, unmatched sample do not have a phone number. We mailed advance letters to 100 percent of the unmatched sample inviting them to participate in the study and encouraged them to call the survey hotline or to request a household questionnaire to complete the survey.

Sample Generation and Processing

The planned sampling approach for the MTS combined the strengths of address-based sampling frame and listed residential frame. The address-based frame permitted differential sampling rates by census tract and the listed residential frame strengthened the coverage and enhanced the efficiency of data collection from hard-to-reach population groups. With the address-based sampling frame, the randomly sampled addresses were divided into two categories: (a) those with telephone numbers ('matched') and (b) those without telephone numbers (unmatched). The address-based sampling frame consists of a current listing of city- and rural-route residential postal addresses for the study area from the delivery sequence file (DSF) of the United States Postal Service. Its main advantage is its reach into population groups that typically participate at lower-than-average levels, largely due to coverage bias (such as households with no phones or cell-phone-only households). The listed residential frame, on the other hand, includes listed telephone numbers from working blocks of numbers for which the name and address associated with the telephone number are known. The advantage of drawing sample from this frame is its efficiency in conducting the survey effort—being able to directly reach households and secure their participation in the survey in a direct and active approach.

The sample from both frames was ordered from a private supplier, Marketing Systems Group (MSG). The address-based sample was systematically drawn from the ADVO frame. ADVO is a direct mail media company that has a proprietary database of up-to-date and deliverable resident/occupant mailing address lists based on the DSF. MSG matched the sampled residential addresses to obtain landline telephone numbers; then, the sample file was forwarded to Direct List for name matching.

A total of 319,187 sample pieces were ordered for the study area. Sample orders were placed in different waves (phases) and specification based on sample analysis and performance. The following table shows the distribution of the overall sample order by sample type for the full study.

Table 8: Summary of Sample by Sample Type

Sample Type	Count	Percent
Address Based Matched	54,322	17.0%
Address Based Unmatched	25,489	8.0%
Listed General	47,679	14.9%
Listed Large HH	40,398	12.7%
Listed Low-Income HH	25,417	8.0%
Listed Young HH	22,208	7.0%
Client-Provided Sample	6	<0.1%
Listed 1-person earning >$50k	10,359	3.2%
Listed Spanish Surname	17,133	5.4%
Listed African-American	8,537	2.7%
Listed New-Mover	31,833	10.0%
Listed High Probability Zero-Vehicle	2,843	0.9%
Listed residing in densely populated census tracts	19,478	6.1%
Listed residing in census tracts near transit	13,485	4.2%
Total	319,187	100.0%

Data Collection

Pretest

The purpose of the pretest phase of the study was to test survey instruments and materials planned for the full study in order to assess respondent reaction, data collection processes, and budget assumptions. The main objectives of the pretest phase were:

1) To test the respondent materials to ensure they were applicable and understood by all respondent groups, despite differences in geography and demographics;
2) To program and test the core programs and processes;
3) To program and test the GPS processes and to ensure that the GPS component was properly designed to yield the desired data; and
4) To evaluate project team performance and respondent participation rates in light of original cost assumptions.

The pretest survey was designed to test the materials, processes, and procedures for the full study. To do so, the data collection goal was to recruit a sufficient number of households in order to obtain complete and usable data from 600 households. The MTS pretest consisted of all necessary data collection activities required to produce a dataset. These activities included sample generation, advance notification, recruitment, placement of respondent materials, reminder calls, retrieval, quality assurance, and data delivery. The pretest focused on all MPOs within the full study area. In total, 860 households were recruited into the pretest study; complete and usable data were obtained from 574 households.

Throughout all pretest activities, the focus was to target areas for improvement prior to the start of the full study. The role of the pretest was critical in the study—it was not designed to make everyone "comfortable," as that approach would have resulted in inadequate and insufficient evaluation of the process. The pretest was referred to as a "dress rehearsal" specifically for this reason; it was a road test of all systems and respondent materials to ensure everything was in place and ready for full implementation. As such, the pretest households were not included as part of the final dataset.

Recruitment

Recruitment for the Massachusetts pretest occurred between September 24 and November 12, 2009. Contact was made with 6,352 households, of which 867 agreed to participate in the study (14 percent recruitment rate). In addition, 203 of the 867 households agreed to participate in the GPS portion of the study (23 percent of all recruited households).

The use of advanced letters is recommended to inform respondents of the purpose of the study, as well as to legitimize the survey effort. Letters were mailed to approximately 56 percent of the total pretest sample. A total of 17,776 records were dialed during the pretest, of which 9,923 received an advanced letter.

The mean call attempt for non-contact sample (answering machines, no answers, and busy signals) was approximately 4.14. Of the 4,187 non-contacted records, 54 percent required over five call attempts. During the pretest, 867 households were recruited with a final recruitment completes per hour rate (CPH) of 0.82. This was slightly lower than the budgeted 0.95 completes per hour rate (CPH). The average interview length was just under 20 minutes.

Retrieval

Pretest retrieval occurred from October 6 through December 23, 2009. Of the 867 recruited households who agreed to participate, 574 actually completed their diaries and were retrieved, representing a 67 percent retrieval rate, which is in line with the budgeted estimate. Of the 203 households who agreed to partake in

the GPS study, 153 were retrieved, representing a 75 percent retrieval rate. The difference in rates can be attributed, in large part, to the monetary incentive offered for GPS participation. A total of 149 households refused to participate, which represents a 17 percent refusal rate. The final retrieval completes per hour rate (CPH) was 0.91, which is in line with budgeted expectations.

The average retrieval interview was just over 40 minutes and includes time needed to research addresses and finalize diaries received by mail. This does not represent total time spent on the phone with the respondent.

Dialing hours

A total of 1,053 interviewer dialing hours were used to secure 860 recruits in the pretest, and 629 hours were used to collect the 574 retrieval completes. This is a total of 1,682 total dialing hours throughout the course of the pretest.

Mailback Processing

During pretest retrieval, 302 respondents chose to mail in their completed diaries rather than complete the survey by phone (35 percent of the total recruits). Of those that opted to mail in their materials, 269 actually did so (89 percent). NuStats was able to complete 255 of the 269 diaries received, which represents a 95 percent completion percentage. The remaining 14 cases were missing data and needed respondent follow-up in order to be considered complete. Calls were placed to these cases throughout the remaining shifts, and contact was not established. Approximately 44 percent of the total retrieval completes were derived from mail back (255/574).

Methods and Design

The pretest was a dress rehearsal of the full study and included 1) drawing a statewide sample, 2) an advance letter mailout, 3) data collection, 4) data cleaning, and 5) data file creation. However, the first major task was the survey instrument design—identifying the required data elements that meet MassDOT's statewide modeling needs as well as the area MPOs' local modeling needs.

The survey was designed to capture the required data elements for MassDOT's regional and travel demand modeling needs. In addition to collecting the standard data variables as inputs to the model, the survey attempted to capture non-auto travel modes such as walk, transit, and bicycle.

The survey instruments, both recruitment and retrieval, were programmed into a CATI environment. The recruitment program is designed to capture household-, person-, and vehicle-level characteristics for each household, to recruit randomly selected households for the GPS component of the study, and to assign households a travel date.

The retrieval program, which is designed to capture all the elements of each person's travel, is supplemented by TripTracer, a customized program used to capture geographic details about each trip. TripTracer is a data quality tool embedded with the road network, public transit layers, place names, and major landmarks for ease of reference to assist the respondent in providing as much trip detail as possible.

Evaluation

The pretest sample design was effective in ensuring an adequate representation of the surveys by geography. However, there was a moderate under-representation of hard-to-reach population groups including large households, zero-vehicle households, low-income households, African Americans, Hispanics, and young households. The sample types targeted towards capturing these population groups were effective. However, the inability to meet the demographic goals of these hard-to-reach population groups

suggests that our assumptions on the oversampling percentages used to draw sample from different sample types needed to be revisited prior to the full study.

NuStats recommended increasing the oversampling percentages for the hard-to-reach population segments based on the findings from the pretest and using targeted sample types more effectively to capture these households, including employing the targeted sample in the beginning of recruitment, monitoring its progress, and offering an incentive to these households. NuStats also recommended offering an incentive to the unmatched (i.e., no landline or cell-only) households, as these households are presumably younger, minority, and/or low-income. Key demographics of pretest participants are shown in Table 11.

Recruitment and retrieval interview lengths by household size are shown in Tables 9 and 10.

Table 9: Pretest: Recruitment Interview Length by Household Size

Household Size	N	Interview Length (min)
1 person	231	13.52
2 persons	325	17.33
3 persons	120	21.58
4+ persons	191	26.38
Total	867	19.70

Table 10: Pretest: Retrieval Interview Length by Household Size

Household Size	N	Interview Length (min)
1 person	173	21.37
2 persons	228	35.02
3 persons	76	52.95
4+ persons	97	51.92
Total	574	40.32

Table 11: Pretest: Distribution of Demographic Characteristics

Key Demographic Variables		Recruited Households	Retrieved Households	2008 ACS	Retrieval Rate
Household size	1	26.6%	30.1%	29.6%	74.9%
	2	37.5%	39.7%	31.7%	70.2%
	3	13.8%	13.2%	16.0%	63.3%
	4+	22.0%	16.9%	22.7%	50.8%
Household vehicles	0	8.4%	8.0%	11.7%	63.0%
	1	31.6%	32.6%	36.0%	68.2%
	2	41.2%	42.0%	37.4%	67.5%
	3+	18.8%	17.4%	14.6 %	61.3%
Household Income	Less than $25,000	15.6%	15.0%	20.2%	64.3%
	$25,000 to $50,000	17.3%	16.3%	19.0%	62.9%
	$50,000 to $75,000	16.4%	18.0%	17.5%	72.9%
	$75,000 or more	50.7%	50.6%	43.2%	66.4%
	Income Refusals	6.6%	6.1%	--	--
Respondent Ethnicity	White	89.2%	93.7%	82.7%	68.5%
	African American	2.3%	0.5%	6.2%	27.8%
	Other	8.4%	5.8%	11.1%	49.2%
Respondent Hispanic Status	Yes	5.0%	3.0%	8.6%	39.4%
	No	95.0%	97.0%	91.4%	67.3%
Respondent Age	<20 years old	22.2%	20.1%	25.0%	56.2%
	20–24	4.1%	2.6%	6.7%	40.5%
	25–34	6.3%	5.2%	12.9%	51.5%
	35–54	30.3%	29.7%	30.8%	60.9%
	55–64	16.4%	19.1%	11.8%	72.3%
	65+	19.0%	21.5%	12.8%	70.2%
	Age Refusals	1.8%	1.9%	--	--
Workers Per Household	0	29.8%	29.6%	14.9%	65.9%
	1	32.2%	33.6%	33.6%	69.2%
	2	31.1%	31.5%	38.7%	67.0%
	3+	6.9%	5.2%	12.8%	50.0%

Non-Response Follow-Up Study

A secondary focus of the pretest was to evaluate who did and did not participate in the survey so as to understand how to better reach out to or recruit those non-responders in the full study. To that end, a non-response follow-up (NRFU) study was designed. This type of study is concerned with unit non-response—that is, entire sample units (households) that may be under-represented in the final survey dataset because of lack of participation.

The purpose of the NRFU was to contact a sub-sample of households who did not participate in the pretest. The goal was to document demographic and travel characteristics among these non-responsive households in an effort to identify differences between those who participate in household travel surveys and those who do not. In October 2009, with direction from the MassDOT, NuStats executed the NRFU effort by

collecting data on the non-responsive households through in-person interviews and observation forms, when in-person interviews could not be conducted.

Specifically, the Massachusetts NRFU approach consisted of the following steps: (1) sample non-contacts and soft refusals, (2) attempt to contact the household three times to complete an in-person interview, (3) complete an observational questionnaire (an external assessment of the household based on the home location and characteristics), and (4) compare these findings to those achieved in the pretest study.

NRFU Study Area Selection

During the design phase of the pretest, the NuStats project team prepared a memorandum outlining the recommended study areas for the NRFU study. This memorandum was provided to the MassDOT for review and comment. Upon review and consideration of favorable study area options, it was decided that Brookline, MA; New Bedford, MA; and Springfield, MA would be targeted as study areas for the NRFU study.

NRFU Sample Selection

The NRFU study methodology called for a sample of 50 household to be selected in each study area. The sample used in the pretest was closely monitored during the recruitment phase in order to generate and identify eligible sample for the NRFU study. To be eligible, sample needed to receive three call attempts and have a specified disposition. These call attempts occurred over a two-week period and at various times of day. Furthermore, sample with the following dispositions were eligible for inclusion in the non-response follow-up sample: Soft Refusals, Specific callback not leading to a complete, General callback not leading to a complete, Hang-Up, Disconnect, Caller ID, Answering Machine, Busy, No Answer, and Households without a telephone match that did not respond by mail.

Overall, 185 household were selected for the NRFU study. Each study area contained the minimum target of 50 household. Available sample above the 50 household minimum was included as contingency and to keep the fieldwork teams as productive as possible.

NRFU Fieldwork Team

NuStats hired a professional staffing agency, Adecco, to organize the fieldwork team of three surveyors. As residents of the study area, these surveyors provided valuable knowledge of the study area. A two-hour training session, moderated and managed by NuStats, was organized and conducted in each study area. The field manager traveled to Massachusetts to conduct these training sessions in person with the purpose of educating the survey teams on the project background, goals, logistics, etc. A training manual distributed to all surveyors included an introduction to the MTS and explained how the NRFU contributes to the overall goal of the study. In addition, specific instructions for executing the fieldwork were clearly outlined so that each surveyor understood their responsibilities and was educated on all survey materials and protocols.

Furthermore, guidelines for the more subjective questions included in the observational questionnaire were discussed in order to achieve consistency between surveyors. All materials necessary for fieldwork were distributed at the training session. These materials included in-person questionnaires, observational questionnaires, sample sheets, clipboards, and writing utensils. At the conclusion of the training session, the field manager answered any questions the surveyors had and provided each surveyor with the list of households they were responsible for contacting. The surveyors worked independently of one another, with each being responsible for conducting interviews and observations for a portion of the households identified within the study area. Overall, the surveyors operated as a team to ensure all households are contacted during the allotted timeframe.

NRFU Fieldwork Hours

Surveyors provided their own transportation or took public transit. Surveyors were available to work eight hours on weekdays (between the hours of 8:00 a.m. and 8:00 p.m.) and on weekends (between the hours of 9:00 a.m. to 12:00 p.m. and 3:00 p.m. to 8:00 p.m.) and were given a three-hour break in the afternoon for lunch. Daily hours were charged when a surveyor arrived at the first household and ended when they left the last household.

NRFU Fieldwork Visits

Surveyors attempted a maximum of three visits to each household. The priority was to complete the in-person questionnaire. If there was no one present in the household, then the second step was to complete the observational questionnaire to make key observations about the residence from clues or indicators about the household and/or neighborhood. A second attempt was made to complete the in-person questionnaire, preferably at a different time of day. Finally, on the third visit, if the surveyor was unable to make contact with the household, they left a short door-knocker questionnaire, along with business-reply mail envelope for mail-back to NuStats.

A total of 175 households resulted in a data collection outcome. Surveyors completed in-person interviews with 28 percent of the households and left a door-knocker with 35 percent of households. Two scenarios resulted in a door-knocker being left at the residence: (1) if the respondent was home, refused to participated but accepted receipt of the door-knocker, and (2) if no contact was made upon the third visit, a door-knocker was left either in the mailbox or on the door knob.

When contact was made with an adult at the sampled household, the interviewer administered the in-person questionnaire. This instrument included 15 questions, three of which were recorded based on interviewer observation; the remainder was asked of the respondent. Forty-eight of these forms were completed.

Recorded by Observation

- Housing Type
- Gender
- Language

Asked of Respondent

- Number of Household Vehicles
- Type(s) of Telephone Service (is the telephone number listed in the phone book?)
- Home Ownership Status
- Number of Household Members
- Licensed Driver Status for respondent and all Household members
- Employment Status for Respondent and all Household members
- Number of places visited yesterday
- Age
- Income
- Race
- Best means to contact respondent (email, phone, mail, etc.)

In addition to the in-person questionnaire, the interviewers completed an observational questionnaire for each household. If the home was visited more than once and the interviewer noted new details, these were noted on the same form. A total of 139 observation questionnaires were completed for the 185 sampled households. The missing cases consisted of "Missing Address" or sample the survey field staff did not attempt to contact because of time constraints.

The observation questionnaire was designed to obtain the following data elements:

- Housing Type: single-family (detached and attached), mobile home, duplex, building with three or more apartments, and "other".
- Neighborhood Type: inner city very dense multi-family, inner city dense one-family and multi-family, traditional suburban (with and without cul-de-sacs), rural, mixed-use, and "other".
- Presence of a driveway
- Number of vehicles in driveway
- Assumptions regarding residence
  - ✓ Does it appear like a single person lives here?
  - ✓ Does it appear like children live here?
  - ✓ Does household income appear to be: low, medium, high?
  - ✓ Does it appear like seniors or retired persons live here?
  - ✓ Does it appear like a Hispanic/Latino neighborhood?
  - ✓ Is it the type of building/neighborhood where young adults (18–24) live?
- Other observations about the home

All visits were noted on the sample form, including date of visit, day of week of visit, the visit outcome, and any interviewer comments.

NRFU Results

In sum, the NRFU study consisted of field staff making a total of 342 visits to the 185 sampled households, distributed across the three study areas and three sample types, resulting in 48 in-person interviews and 139 observational surveys. The purpose was to contact a sub-sample of households that did not participate in the pretest. The goal was to document demographic and travel characteristics among these non-responsive households in an effort to identify differences between those who participate in household travel surveys and those who do not. In addition, it served to provide insights regarding the best way to contact these non-participants for inclusion in the full study.

Non-respondents. The traditional non-response approach (comparing survey demographics to census) identified the non-respondents as large households, Hispanic households, and "young adult" households. The in-person NRFU survey confirmed these are the missing population subgroups. Thus, for the full study, tracking demographics against these census parameters will be necessary. Furthermore, the NRFU survey results suggest that non-responsive household have fewer number of vehicles and thus, it is assumed, make fewer trips and fewer long distance trips. Non-responders appear to be more transient, with only 54 percent of the NRFU sample owning their home. Eighty percent of the pretest sample reported owning their home. Young adults continue to be under represented in travel surveys. This is shown in the pretest and NRFU results, which both trend toward an older demographic. The NRFU results seem counterintuitive to the idea that young adults are non-responsive. However, over half of the NRFU observation questionnaire indicated the households had characteristics of a young-adult household. It was reported through the observation questionnaires that 71 percent of households in New Bedford to have evidence of a young-adult residents.

Methods. The NRFU effort in general was a success. The field team met the overall goal of obtaining at least 30 completed in-person interviews. However, they fell short of the secondary goals of completing ten in-person interviews within each study area. The fieldwork team would have benefited from additional time in the field. In the future, the methodology could be revised in order to take advantage of the face-to-face time with the respondent to investigate why they did not participate, whether or not they received the materials, and how to entice them to respond in the future. Unmatched sample could be shown the advance letter and asked if they recall receiving it, and what it should look like to encourage them to read it. For the matched sample, they could be shown the dates and times the team tried to reach them by phone and ask when would be better or what the team could say to keep them from hanging up. These details would help to finalize the full study survey design.

Overall, the NRFU effort confirmed that the non-participants in this study included large households, minority households, young adult households, low-income households, and high-income household. The various sample types, matches versus unmatched, could be leveraged to increase response rates to these non-responsive sample. More aggressive advance mailing and promotion in or around the college campus can help target young adults. Demographics are contained in Table 12.

Table 12: Pretest: Comparison of NRFU Demographic Characteristics with Pretest Results

Demographic		2008 ACS	Pretest	NRFU
Household Size	1	29.6%	30.5%	19.2%
	2	31.7%	39.4%	25.5%
	3	16.0%	13.4%	29.8%
	4+	22.7%	16.7%	25.5%
Household Vehicles	0	11.7%	8.0%	14.6%
	1	36.0%	32.6%	47.9%
	2	37.4%	42.0%	29.2%
	3+	14.6%	17.4%	8.3%
Age	< 24	32.4%	23.0%	0.0%
	25-34	12.6%	5.1%	16.7%
	35-54	30.1%	30.4%	32.1%
	55-64	16.4%	19.5%	12.8%
	65+	23.4%	21.8%	31.6%
Home Ownership Status	Own Residence	64.5%	80.1%	54.2%
	Rent Residence	35.5%	19.9%	45.8%
Household Ethnicity	White	82.7%	93.6%	55.6%
	African Amer., Black	6.2%	0.9%	8.9%
	Hispanic	8.6%	1.3%	28.9%
	Asian	5.0%	1.9%	2.2%
	Other/Refused	6.1%	2.3%	4.4%
Household Income	Less than $25,000	20.2%	14.1%	
	$25,000 to $50,000	19.0%	32.2%	
	$50,000 to $75,000	17.4%	32.2%	
	$75,000 or more	43.2%	15.4%	

Impact of Pretest on Final Survey Design

Processes and Procedures

Overall, the pretest was successful in terms of the procedures and collection of necessary data.

1) The targeted sample was fairly successful in finding under-performing demographic groups; however, it was closely monitored during the full study because some cells in the pretest were too small from which to draw conclusions.
2) The use of advance letters was found to be very beneficial as demonstrated by the significant improvement in recruitment productivity.
3) Despite not achieving the budgeted recruitment completes per hour rate (CPH), 67 percent of the recruited respondents successfully completed the retrieval portion, which was in line with the budgeted rate of 68 percent. NuStats expected that this rate would improve slightly for the full study with a greater understanding of the study area and the demands of the project.
4) The pretest dataset was skewed to older respondents. This was monitored carefully in the full study, and households with all retired members were randomly terminated from participation.
5) Based on the results of the Pilot NRFU effort, in lieu of conducting a full study NRFU survey, NuStats and MassDOT agreed that the implementation of a "Rest and Recycle" sample effort would have greater benefit on project participation. More detail on the rest and recycle effort can be found in the Response Rates section of this report.

Advance Notification

Maximizing response rate is vital to the success of any household travel survey for two specific reasons. Primarily, maximizing response rate ensures that the survey data is representative of a wide range of socioeconomic factors that are characteristic of Massachusetts households. Secondly, maximizing response rates minimizes the cost associated with the purchase of excess survey sample.

During the pretest, NuStats tested the efficacy of five different advance-mailing methods to gauge the effectiveness of survey communications in the overall participation rates. The pretest provided a mechanism to quantifiably compare each mailing method and, ultimately, make a recommendation for the full study. The sample frame for this study, as previously discussed, was a database containing all households in Massachusetts with a mailing address.

Sample records were either matched (address and landline telephone number) or unmatched (address only). The four primary contact methodologies implemented during the pretest are described below. All advance-mailing materials can be found in Appendix H.

1) ***Matched – Cold Call:*** These households were not mailed any advance notification materials at all prior to being called for recruitment.
2) ***Matched – Letter and Brochure:*** These households were mailed an advance letter and a brochure. Shortly after the letter and brochure mailing, these households were called for recruitment.
3) ***Matched – Self-Mailer Brochure Only:*** These households were mailed a self-mailer brochure that explained the purpose of the study and respondent participation. Shortly after mailing the self-mailer brochures, these households were called for recruitment.
4) ***Unmatched – Household Questionnaire:*** These households were mailed a letter, brochure, and a household questionnaire that contained the same questions as the telephone recruitment survey. The questionnaire asked questions about the household, each person in the household, and about each vehicle, and asked for contact information (e.g., cell phone number, work number)

so that the remainder of the survey (assigning a travel date and trip data) could be conducted via phone rather than mail. A pre-paid postage return envelope was provided for those who cared to participate by mail. Prior to receipt of this completed questionnaire by NuStats, there was no means of making telephone contact with the household, as a landline telephone number could not be initially matched to these addresses.

5) ***Unmatched – Contact Card:*** These households were mailed a letter, brochure, and a contact card (return postage paid) that simply asked for contact information so that the remainder of the survey (assigning a travel date and trip data) could be conducted via phone rather than mail. The contact card also provided the project website, which was another means for respondents to submit their contact information. Prior to receipt of this completed contact card by NuStats, there was no means of making telephone contact with the household, as a landline telephone number could not be initially matched to these addresses.

These methods provided a wide range of sample statistics for each of the four sample types (unmatched households receiving either the household questionnaire or contact card were aggregated because insufficient samples were collected to conduct separate analysis for each of these two groups) and provided the statistics at the aggregate level. There were several key points of interest that helped to inform the full study advance notification method:

- ***Regarding the ratio of recruited households to contacted households,*** the unmatched sample performed best. However, this ratio is based on the number of respondents that took it upon themselves to make initial contact with NuStats. Of the 2,225 records that were sent advance letters, 20 households responded, of which 15 were recruited for participation. When the matched sample are analyzed, the data suggest that the matched records that were mailed a letter and brochure performed best.
- ***Regarding recruited households,*** the matched sample that were mailed a letter and brochure performed best.
- ***Regarding retrieved households,*** the matched sample that were mailed a letter and brochure yielded the highest number of (1) retrieved households, (2) the highest ratio of retrieved households to households that were mailed, and (3) the highest ratio of retrieved households to households that were dialed.
- ***Regarding retrieval response rate,*** the matched sample that were cold-called slightly outperformed the matched sample that were mailed a letter and brochure. However, these differences are negligible.
- ***Regarding overall response rates,*** the product of the recruitment response rate and the retrieval response rate, the matched sample that were mailed a letter and brochure outperformed all other sample types. NuStats recommended this method for the matched sample households for the full study.

Incentives

Although a very poor response was obtained from the unmatched sample, research has shown that the households that either do not have a telephone at all or only have a cell phone are an important market segment. These may be younger, more mobile, or lower-income households, all of which are historically more difficult to survey. For the full study, NuStats recommended offering a $25 incentive to these households, via letter and contact card, to solicit participation. These households were mailed the incentive only if they participated in the entire survey effort (i.e., both recruitment and retrieval).

Recruitment Questionnaire

No significant changes to the recruitment survey instrument were suggested. The survey flow worked well, as did the content. However, there were suggestions to shorten the introduction (too long) as well as to

move the mention of the GPS component after the initial contact introduction. The introduction was slightly shorter in the full study, but still described the survey process and purpose.

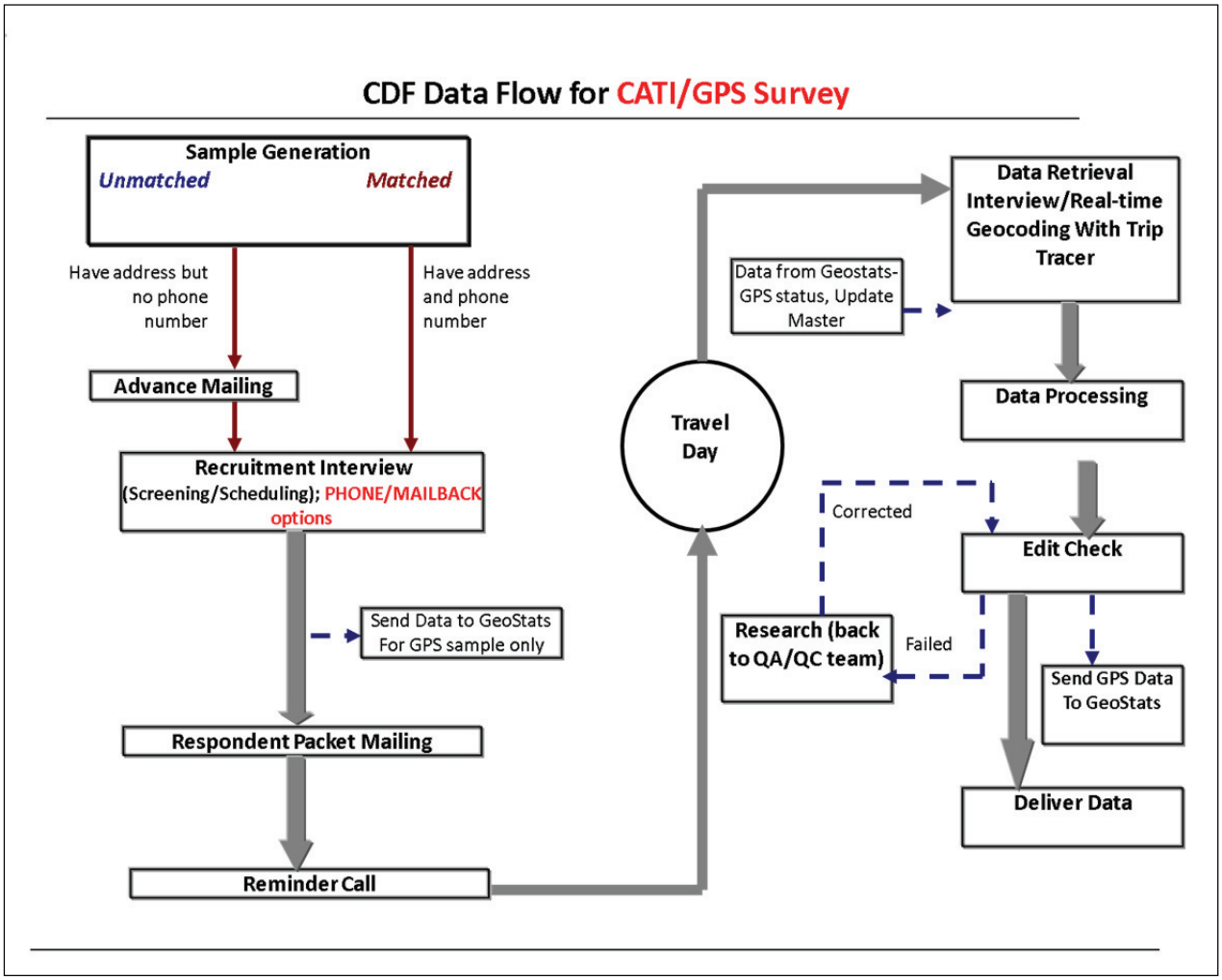
Retrieval Questionnaire

More recommendations were made to the retrieval questionnaire than the recruitment questionnaire. These included modifications to ensure all places visited during the travel day were recorded (i.e., additional emphasis on script text probing for missed trips), additional text to ensure capture of access/egress non-motorized trips, the additional capture of toll road entry and exit points, "Charlie Ticket" was added to the transit fare payment list, personal garage/driveway was added to the parking location list, and "Pick Up" and "Drop Off" passenger were added to the Activities list.

Full Study Survey Process

Full Study data collection activities began in June 2010 and continued through November 2011. These activities centered around seven main stages: advance notification, reminder postcard, recruitment, placement of materials, reminder call, travel data retrieval, and data processing. The details regarding each stage are provided in this section and illustrated in the following figure.

Figure 4: Continuous Data Flow (CDF) Process



Advance Mailing

The advance mailing served as advance notification to the household that it had been randomly selected and would be receiving a call regarding the study, or were given the option of calling NuStats to participate in the study. The mailing also provided information about the study sponsor, introduced NuStats as the company that would be contacting them, and provided the Web site address and a telephone number where additional information could be obtained.

A study letter and brochure were mailed to a portion of households for which a name and address were known (i.e., matched) prior to the recruitment call, as well as to households with no phone number (i.e., unmatched); however, contact cards were mailed to unmatched households in addition to the letter and brochure in hopes that households would mail the card back with completed contact information. If they preferred, unmatched households could also request a household questionnaire to complete via mail. The household questionnaire contained all recruitment data elements.

Recruitment

The recruitment interview was administered using a Computer-Assisted Telephone-Interviewing (CATI) program. At that time, each household was telephoned by an interviewer to determine if they would participate in the study. If the household did agree to participate, demographic information was collected including income, household size, vehicle ownership, and other household characteristics. In addition, demographic characteristics were obtained for each member of the household, including age, gender, employment, and school status (see Appendix A for the recruitment questionnaire).

Over the course of the recruitment effort, 271,660 telephone numbers were called. Of these:

- 43,351 (16.0 percent) resulted in contact with eligible households,
- 41,755 (15.4 percent) were determined to be ineligible (non-working, non-household, or non-voice lines, and
- 186,554 (68.7 percent) were unable to be classified as eligible or ineligible.

Of the eligible households reached, 25,331 of the 43,351 agreed to participate in the full study (58.4 percent). The average length of the recruitment call was 17.1 minutes. It took an average of 3.7 call attempts to reach a household for recruitment. Table 14 shows the average interview length and the average number of call attempts required to reach each household based on household size. As indicated, the larger the household, the longer the interview length. The table also shows that it took fewer call attempts to reach households with fewer members.

Table 13: Recruitment Interview Length and Average Call Attempts/Household, by Household Size

Household Size	N	Average Call Duration (in min.)	Average Call Attempts
1	5,615	11.6	3.5
2	7,477	15.2	3.6
3	4,729	18.7	3.7
4+	7,510	22.2	3.9
Overall	25,331	17.1	3.7

The recruitment instrument performed well as item non-response was marginal, as evidenced by the unweighted frequency of responses to the recruitment questionnaire contained in Appendix F. The following is list of questions for which respondents did not all provide answers:

- Household Ethnicity (1.1% refused)
- Hispanic/Latino Household (0.6% refused)
- Household Residence Type (0.1% refused)
- Home Ownership (0.1% refused)
- Cell Phone Lines (0.2% refused)
- Landlines (0.1% refused)
- Fax Lines (1.1% refused)
- Household Income (6.8% refused)
- Gender (0.1% refused)
- Age (2.2% refused)
- Valid Driver's License (<0.1% refused)
- Respondent has Transit Pass (<0.1% refused)
- Transit Pass Type (0.7% refused)
- Non-Worker Employment Status (0.5% refused)
- Hours Worked per Day (0.4% refused)
- Days Worked per Week (0.1% refused)
- Typical Mode to Work (0.2% refused)
- Worker Telecommutes (0.1% refused)
- Flexible Work Program Offered (0.2% refused)
- Type of Flexible Work Program Offered (2.5% refused)
- Respondent Participates in Flexible Work Program (0.1% refused)
- Disabled License Plate (0.1% refused)
- Disabled Transit Registration (0.1% refused)
- Level of Education Completed (0.1% refused)
- School Enrollment Status (<0.1% refused)
- Full-Time/Part-Time Student Status (<0.1% refused)
- Student Grade Level (0.3% refused)
- Typical Mode to School (0.1% refused)
- Transit Trips Made in Past week (0.1% refused)
- Bike Facilities Available at Work/School (1.3% refused)
- Days used Bike for Recreation in Past Week (6.0% refused)
- Days used Bike for Transportation in Past Week (6.0% refused)
- Bike Lanes/Trails Used for Non-Recreational Purposes (9.5% refused)
- Vehicle Year (0.2% refused)
- Vehicle Make (0.2% refused)
- Vehicle Body (5.5% refused)
- Vehicle Fuel Type (0.1% refused)

Respondent Packet Mailing

The day following recruitment, the demographic information was processed into the master dataset, and packets were assembled for each recruited household. These packets included a cover letter, travel diary with instructions and an example, and a postage-paid envelope to return the completed diaries after the retrieval interview (see Appendix H). Travel days were scheduled 7–10 days after recruitment to allow for sufficient time for packets to reach the households using First-Class mail.

Reminder Message

The night prior to the assigned travel day, reminder calls were made to the households. This reminder call served three key purposes:

1) Confirm that the household received the packet and answer any questions respondents might have about using the travel diary to track their travel,
2) Schedule an appointment to conduct the retrieval interview, and
3) Increase the likelihood that the household will follow through with recording their travel by re-iterating the importance of the study and the household's commitment to participate.

For those instances where an answering machine was reached, the interviewers left brief messages that referenced a toll-free number for respondents to call if they had questions.

Data Retrieval

The day after an assigned travel day or at an agreed-upon time, telephone calls were made to retrieve the travel data recorded by each eligible household member in his/her travel diary. The interviews were guided using CATI programs of the retrieval instrument (see Appendix B). Overall, 47 percent of households retrieved via CATI interviewer. Fifty-two percent of households mailed back their travel diaries, as seen in Table 14.

Table 14: Retrieval Mode

Phase	% CATI	% MAIL	TOTAL
Retrieval	47.5%	52.5%	15,033

Shown in Table 15, the average interview length was 28.1 minutes, and it took 8.5 call attempts to complete retrieval, on average.

Table 15: Retrieval Interview Length and Average Call Attempts/Household, by Household Size

Household Size	N	Average Call Duration (in min.)	Average Call Attempts
1	4,123	19.1	6.9
2	4,829	25.1	7.9
3	2,538	32.2	9.3
4+	3,543	39.2	10.4
Overall	15,033	28.1	8.5

The retrieval instrument had minimal item non-response. As indicated in the unweighted frequencies contained in Appendices G of this report, the variable that experienced the highest item non-response was

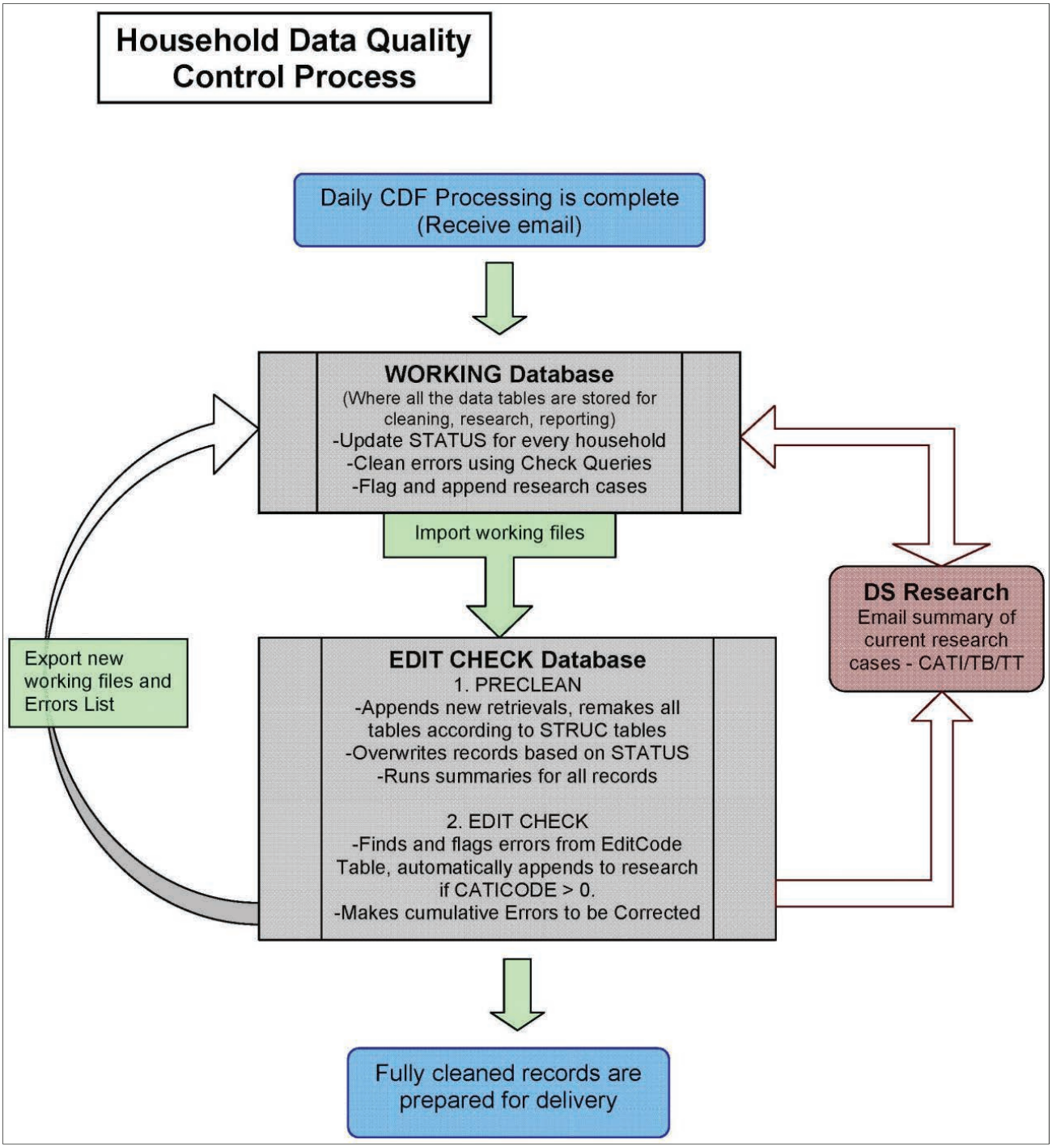
the question that asked drivers whether they paid to park, with just under 9 percent of respondents refusing to answer this question.

Data Processing, Coding, and Correction

Data processing took place throughout the study, beginning with the creation of the advance notification mailout, continuing with the release of sample for recruitment, processing recruitment data for the respondent mailout, appending the retrieval data to the master tables, and performing initial quality control measures on the data. This process is summarized in Figure 5 on the following page. A master control file tracked the progress of each household through the various survey stages, with codes to allow immediate identification of problem cases that were not progressing according to schedule as well as confirmation that cleared cases moved along as appropriate. Routine data checks included the following:

- Data range checks to ensure data were inside the expected ranges for each variable and that there was agreement across data files (for example, if the household had four persons and two vehicles, there should be four records in the person file and two records in the vehicle file).
- Confirmation that travel data were collected from all household members.
- If a person reported no travel, the household was flagged for manual review to confirm the reason for non-travel was appropriate based on the demographic characteristics of the household member. Those cases where the reason for non-travel was suspect or did not make sense within the context of the available demographic information were flagged and returned for confirmation or replacement.
- Within the travel data itself, several items were checked. The following are examples of conditions researched within the trip data:
  - ✓ Did each trip begin and end at a different location? Were loop trips (those that have the same origin and destination) coded correctly?
  - ✓ Did each person return home at the end of the travel day? If not, did the final recorded destination make sense within the context of the household and person characteristics?
  - ✓ For all instances where a respondent reported traveling with other household members, was the shared trip reported for all other household members?
  - ✓ For all trips with "auto-driver" as the reported mode, was the respondent a licensed driver?
  - ✓ For all trips reported as "auto-passenger", did another household member report the same trip as an auto-driver? If not, did the passenger report riding in a non-household vehicle with at least one other person making the trip?

Figure 5: Data Processing Flow Chart


Household Data Quality Control Process
Daily CDF Processing is complete (Receive email)
WORKING Database
(Where all the data tables are stored for cleaning, research, reporting)
-Update STATUS for every household
-Clean errors using Check Queries
-Flag and append research cases
Import working files
DS Research
Email summary of current research cases - CATI/TB/TT
Export new working files and Errors List
EDIT CHECK Database
1. PRECLEAN
-Appends new retrievals, remakes all tables according to STRUC tables
-Overwrites records based on STATUS
-Runs summaries for all records
2. EDIT CHECK
-Finds and flags errors from EditCode Table, automatically appends to research if CATICODE > 0.
-Makes cumulative Errors to be Corrected
Fully cleaned records are prepared for delivery

Real-Time Geocoding with Trip Tracer

All trip-ends and habitual addresses were geocoded during the retrieval telephone interview with the TripTracer software. The TripTracer software was designed to provide interviewers with study area details (road names, landmark references, etc.). Interviewers used this additional detail to confirm respondent-reported locations in real time. An additional benefit of the use of the TripTracer software was that once the interview was completed, full address information, with matching X/Y coordinates, for 100 percent of the locations, was immediately available.

Assessment of Survey Quality

For the full study, the survey quality was improved when compared to the pretest. Non-response for Household, Person, Vehicle, and Place items had a decreased non-response rate for the key variable compared to pretest. During the rigorous quality control process for regional household travel surveys, NuStats generally expects that up to 3 percent of retrieved households will not be included in the final dataset due to unresolved data inconsistencies. MTS full study exceeded that benchmark with very high quality survey data—while 15,281 households completed both the recruitment and retrieval interviews, 15,033 households passed all quality checks and were included in the final data file, a loss of only 1.6 percent.

Edit Checks

The Edit Check module is used by analysts to check data for consistency and accuracy, as well as to transform data to the final delivery format and perform summaries on this data. For the Edit Check section, there are a number of queries that are run to check the quality of the data and update the status flags for any existing data and other queries. The following table details the automated edit checks performed on the full study dataset.

Table 16: Edit Checks

EDITCODE	MESSAGE	TREATMENT	FILE
1	TOP PRIORITY--Arrival before departure (TRIP)	Check to see if TRPDU is >0, If not there is a time error between this row and the previous row	TRIP
2	TOP PRIORITY--Departure before arrival (TRIP)	Check to see if ACTDU is >0, If not there is a time error between ARRIVAL and DEPATURE	TRIP
3	TOP PRIORITY--First place does not start at 3am (TRIP)	Check the ARRIVAL time of PLANO=1, it should be 300, if not maybe the first trip is missing or there is a reporting error	TRIP
4	TOP PRIORITY--Last place does not end at 2:59am (TRIP)	Check the DEPART time of the last trip, it should be 259, if not maybe there is a numbering error between trips or the last trip has a reporting error	TRIP
5	TOP PRIORITY--Last place not home- confirm (TRIP)	Confirm with last place description	TRIP
6	TOP PRIORITY--Day Time Totals <> 1439 (TRIP)	One of the TRPDUR/ACTDUR's is false	TRIP
7	TOP PRIORITY--Need reason for no travel/filled in and should not be (PER)	Check NOGO/TRAVL	PER
8	HHSIZ (HH) not equal to person count (PER)	Check PER data to see if everyone is a valid person , then modify HHSIZ	HH/PER
9	HHVEH (HH) not equal to vehicle count (VEH)	Check VEH data to see if vehicle is a valid vehicle , then modify HHVEH	HH
10	HHWRK (HH) not equal to workers count (PER)	Check PER data to see if everyone >15 has a valid EMPLY code, then modify HHWRK	HH/PER
11	HTRIPS (HH) does not match number of household trips (TRIP)	RERUN PRECLEAN	HH/TRIP

EDITCODE	MESSAGE	TREATMENT	FILE
12	INCOM is missing or is out of range (HH)	Check INCOM, look in REC data	HH
13	ASSN or DAY is missing or invalid (HH)	Check ASSN, make sure it is a valid number, look in REC data	HH
14	OWN missing or is out of range (Including OWNO)	Check OWN and OWNO, look in REC data	HH
15	RESTY missing or is out of range (Including RESTO)	Check RESTY and RESTO, look in REC data	HH
16	HHSTU does not match number of HHSTU	RERUN PRECLEAN	HH
17	TRIP - Person without Drivers License Driving	Check Person Roster	PER
18	TRIP - Person Making Trips not in PER file (PER/TRIP)	Check Trip file or Person Roster for inconsistency	TRIP
19	RELATION of "self" is duplicated or missing (PER)	Two People in HH have relation as "SELF" check age gender and PERNO to see who should be the respondent, generally PERNO 1 is the respondent, and should have the relation of self	PER
20	Person is missing from trip file (PER/TRIP)	This person is missing from the trip file, look in RET data and if unresolved send to research (this person may have been deleted RET)	PER/TRIP
21	TRIP-person traveling together (TRIP)	Intra-household travel inconsistencies	TRIP
22	AGE and/or GENDER is missing or out of range (PER)	Check AGE and GENDER, one could be missing, RET (add per) and REC data	PER
23	PERSON not in HH file	There is no HH in the HH table for this PERSON, check REC and RET or send to RESEARCH	HH/PER
24	Unemployed person working or work related on travel day (PER/TRIP)	Check to see if work is valid activity, if no work is in PER, update PER with WORK information (add per)	PER/TRIP
25	School info missing (PER) - Part1	Check PER school enrollment data, update from RET (add per)	PER
26	School info missing (PER) - Part 2	Check PER school location data, update from RET (add per)	PER
27	School info missing (PER) - Part 3	Check PER school data, update from RET (add per)	PER
28	Activities do not match PTYPE (TRIP)	Check place type, address, and place name	TRIP
29	Trip duration (TRPDU) is out of range or does not agree with PLANO (TRIP)	Check Arrival time of current place and departure time of previous place, PLANO=1 should have a null TRPDU	TRIP
30	Travel in (TRIP) file does not correspond to a person (PER)	Extra TRIP data, this person is not in per. Check to see if PERNO's changed in RET (add per and del per)	PER/TRIP
31	PTRIPS (PER) does not match number of person trips (TRIP)	RERUN PRECLEAN	PER/TRIP
32	PTRIPS (PER) does not match number of person trips (TRIP)	RERUN PRECLEAN	PER/TRIP
33	PTRIPS (PER) does not match number of person trips (TRIP)	RERUN PRECLEAN	PER/TRIP
34	MODE does not agree with PLANO or is a refusal (TRIP)	PLANO 1 should not have a mode, there should be a MODE for all other PLANO's	TRIP
35	Non-student doing school activities on travel day (PER/TRIP)	Check ACT1/ACT2 in TRIP, Check AGE, if a student add student variables to PER, if not, change activity to match place	PER/TRIP
36	Number of household members traveling together is larger than household size (	Check HHMEM in TRIP it is too large	TRIP
37	ACTIVITY DURATION =0	All activities should have a duration; RERUN PRECLEAN and check trip times	TRIP
38	LOOPTRIP	Review loop trip and confirm if valid	TRIP
39	VEH YEAR is missing or is out of range (VEH)	Check rec data	VEH
40	PER - Employment Verification (EMPLY,VOLUN,WORKS) - Part 1	Review person data and send for research if missing	PER

EDITCODE	MESSAGE	TREATMENT	FILE
41	PER - STUDENT (SMODE,O_SMODE,SLOC)	Review person data and send for research if missing	PER
42	TRIP - Transit section - Route Name missing or transfer not selected - (MODE1)	Get Route Name or Check Transit Roster	TRIP
43	PER - GEND = 9	Check rec data	PER
44	PER - AGEB is NOT NULL	Null out AGEB if AGE is not refused	PER
45	PER - WKSTAT is not null	Review WKSTAT and null out if worker	PER
46	HH - Zero-trip household	Obtain travel info from day where trips were made	TRIP
47	PER - School-aged person not a student	Obtain school information, or reason not in school	PER
48	TRIP - Auto passenger riding alone	Include driver in PARTY or change to driver	TRIP
49	PER - Person under 14 years old is INTRV=1	Change INTRV=2 and get actual PROXY for that person	PER
50	Worker has no Work Address in HOTLIST	Send for research to collect work address	HOTLIST
51	Student has no School Address in HOTLIST	Send for research to collect school address	HOTLIST
52	Speed of Trip is too fast for mode	Review address, coordinates, mode, and travel times	TRIPS
53	Cati Trips are not equal to TripTracer Trips on a HH Level	Send to research to review within trip tracer	TRIPS
54	Cati Trips are not equal to TripTracer Trips on a Person Level	Send to research to review within trip tracer	TRIPS
55	Cati Trip is not in TripTracer	Send to research to review within trip tracer	TRIPS
56	Middle waypoint that has no Dummy Name or the name is null	Send to research to review within trip tracer	WAYPOINTS
57	Sequential waypoints don't have equal end/start locations	Send to research to review within trip tracer	WAYPOINTS
58	Sequential waypoints don't have equal end/start locations	Send to research to review within trip tracer	WAYPOINTS
59	Sequential waypoints don't have equal end/start locations	Send to research to review within trip tracer	WAYPOINTS
60	Record has rows with PTYPE=Home and differing x/y coords	Send to research to review within trip tracer	TRIP/WAYPOINTS
61	Record Home address in hotlist	Send to research to review within trip tracer	HOTLIST
62	Transit Trip - Missing Access and/or Egress Trip.	Send to research to review within trip tracer	TRIP/WAYPOINTS
63	NOGO=Out of Area but person has waypoint within study area	Send to research to collect out of area location if possible	PER/WAYPOINTS

Geographic Coverage

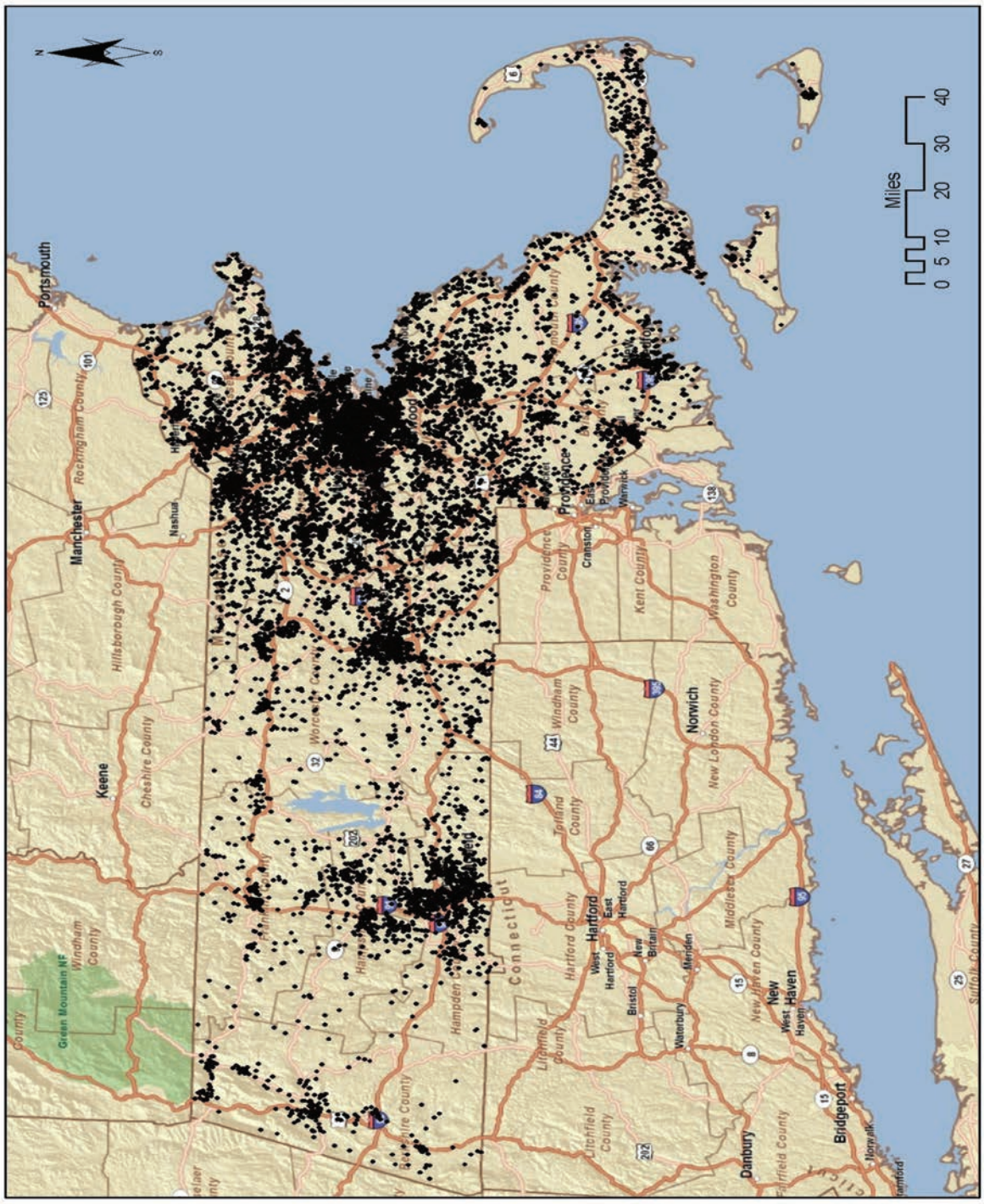
Overall geographic distribution of the final (unweighted) data file was roughly proportionate to the 2010 Census distribution by MPO Region as shown in Table 22. While Boston, PVPC, NMCOG, MRPC, NPEDC, and FRCOG were slightly over-represented, some others were slightly under-represented in the final MTS data file.

Table 17: MPO Distribution

MPO Region	Massachusetts Travel Survey (Final Unweighted data file)		All Households (2010 Census)
	Count	Percent	
Boston MPO (MAPC)	7661	51.0%	48.2%
Southeastern Massachusetts MPO (SRPEDD)	1181	7.9%	9.4%
Pioneer Valley MPO (PVPC)	1488	9.9%	9.4%
Central Massachusetts MPO (CMRPC)	1148	7.6%	8.3%
Old Colony MPO (OCPC)	554	3.7%	4.7%
Merrimack Valley MPO (MVPC)	711	4.7%	4.9%
Northern Middlesex MPO (NMCOG)	640	4.3%	4.1%
Cape Cod MPO (CCC)	498	3.3%	3.8%
Montachusett MPO (MRPC)	529	3.5%	3.5%
Berkshire MPO (BRPC)	303	2.0%	2.2%
Franklin Transportation Planning Organization (FRCOG)	262	1.7%	1.2%
Martha's Vineyard MPO (MVC)	35	0.2%	0.3%
Nantucket MPO (NPEDC)	23	0.2%	0.2%
Statewide Total	15033	100.0%	100.0%

Figure 6 displays the geocoded home location of all households that participated in the full study and were contained in the final weighted data file.

Figure 6: Retrieval Household Locations (Map of Massachusetts)



Demographic Coverage

The full study effort continually tracked the demographic representation to inform sampling procedures in an effort to reach a representative sample. Table 18 shows the unweighted distribution of demographic characteristics of participating households as compared to 2006–2010 five-year estimates from the American Community Survey (ACS) data. The sampling approach resulted in a household distribution that varied from the ACS in some areas, while matching in others.

Table 18: Demographic Results Compared to ACS

Demographic		Massachusetts Travel Survey (unweighted)	State of Massachusetts 2006-2010 ACS
Total Households		15,033	2,512,552
Household size	1	27.4%	28.9%
	2	32.1%	32.1%
	3	16.9%	16.1%
	4+	23.6%	22.8%
Household workers	0	23.5%	25.5%
	1	34.8%	36.4%
	2	33.9%	30.2%
	3+	7.7%	7.8%
Household vehicles	0	10.2%	12.2%
	1	31.4%	35.7%
	2	39.1%	37.1%
	3+	19.3%	15.0%
Household Income	Less than $25000	17%	20.4%
	$25,000–$49,999	16%	19.2%
	$50,000–$99,999	29%	30.5%
	$100,000-$149,999	17%	16.4%
	$150,000 or more	14%	13.4%
	Income Refusals	7%	NA
Ethnicity	Hispanic	4.9%	9.3%
	Non-Hispanic White	85.5%	76.8%
	Non-Hispanic Other	8.5%	13.8%
	Refused	1.1%	NA
Respondent Age	Under 20 years	24.7%	25.2%
	20–34 years	10.7%	19.9%
	35–54 years	31.6%	29.6%
	55–64 years	19.1%	11.7%
	65 years and over	11.7%	13.5%
	Age Refusals	2.2%	NA

Response Rates

The response rate calculation is itself a calculation of two rates, which are multiplied together to form a third rate. The first rate is the recruitment rate, which reflects the proportion of the sample that was recruited into the study. There are two approaches to calculating recruitment rates: 1) that which is prescribed by the Council of American Survey Research Organizations (referred to herein as the recruitment rate), which tends to underestimate the real response rate, and 2) the simpler estimation of participation rate, which is the ratio of all recruited households to all sample eligible for recruitment, which tends to over-estimate the recruitment rate. The true recruitment rate lies somewhere in between. The second rate is the retrieval rate, calculated as the proportion of all retrieved households to all recruited households. The final response rate is derived by multiplying the recruitment rate (or participation rate) by the retrieval rate.

Data were collected from all household members for the 15,033 households that completed the full study. This is a retrieval rate of 59.3 percent (15,033 retrieved / 25,331 recruited). The overall response rate for the study is determined by multiplying the recruitment rate (58.4 percent) by the retrieval rate (59.3 percent). For this study, the response rate is 34.6 percent. This means that slightly more than one out of three eligible households contacted about participation in the Massachusetts Travel Survey completed all activities associated with the project.

The response rates for the MTS full study effort are shown in Table 19, along with those from other recent studies. The MTS full study response and participating rates are similar to other studies.

Table 19: Response Rate Comparison to Other Surveys

Study	Year	Final Response and Participation Rate
Massachusetts Travel Survey	2010–2011	34.6%
ARC Regional Travel Survey	2011	5.9%–34%
CALTRANS HH Travel Survey	2011	5.5%
ARC Regional Travel Survey Pre-Test	2010	11%–31%
Central Indiana Full Study	2010	41%
Oregon Full Study – Region 4	2009	39%
Oregon Full Study – Region 2	2009	44%
Central Indiana Pre-Test	2008	10%–36%
Oregon 1-day Pre-Test	2008	15%–46%
Chicago Full Study	2007–2008	10%–31%
Chicago Pre-Test	2006	9%–29%

In lieu of a full study NRFU effort and in order to increase full study participation rates, a "Rest and Recycle" strategy was implemented. With this strategy, households are mailed the advance letter and called for the recruitment interview as normal. When NuStats was not able to contact a household (busy signals, no answer, answering machines, etc.), the telephone numbers were rested and not called for a period of one month. Following that rest period, the sample was "recycled", and additional recruitment calls were made to attempt to gain participation from those households.

GPS Subsample

In early 2009, the MassDOT contracted NuStats to conduct the MTS, the first step of which was the pretest study with a GPS subcomponent. GeoStats, as a subcontractor to NuStats, was responsible for implementing the GPS component. The full study portion of the survey began on June 14, 2010. The GPS portion of the full study concluded on July 18, 2011. This section documents the GPS data collection and processing methods used and describes the findings of the GPS component of the full study.

The objective of the GPS component was to obtain at least 500 GPS/CATI complete households in the full study effort. GeoStats projected that approximately 770 households would need to be deployed with GPS devices to meet this goal. In all, wearable GPS devices were deployed to 780 households (with 1649 household members receiving GPS devices) of the households recruited into the full study.

The purpose of the GPS component was to collect very detailed information about all trips made by the GPS subsample and to estimate levels of trip underreporting in this subsample that could be applied to the larger, non-GPS sample. The GPS devices were to be used for two consecutive weekdays, with the first weekday coinciding with the assigned diary/travel day. For Friday travel dates, GPS participants were asked to wear the device for four days, to collect GPS data from Friday through Monday.

A wearable (or person-based) GPS approach was implemented to capture all trips made by all travel modes within the GPS households. In this approach, all household members between the ages of 16 and 75 (inclusive) were provided with a wearable GPS data logger. Local deployment personnel shipped and received returned equipment from their home. As GPS devices were returned by GPS households, the data collected on the devices were downloaded and posted to the GPS Project Management Website. From there, the data were imported into the project database at GeoStats and processed by analysts to review and confirm trip end locations and mode assignments. A $25 incentive was offered for each household member who carried their GPS device and successfully reported their travel data; however, this was only paid if everyone in the household participated as requested.

Deployment Methods and Results

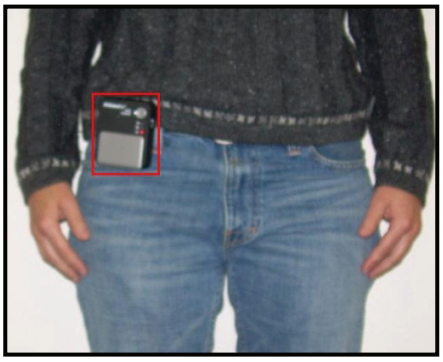
In the GPS component of this study, battery-powered GPS devices were provided to all deployed households for all household members between the ages of 16 and 75 (as reported during the recruit call). This section of the report will describe the GPS equipment used, will review the methods employed to distribute and collect the GPS devices, and will present the results of the deployment effort.

GPS Equipment

The GlobalSat GPS Data Logger is a rugged yet simple GPS data logging device (see Figure 7) that has been deployed by GeoStats in seven household travel studies and physical activity studies conducted since 2007. The GlobalSat device is lightweight (6 oz.) and small (2.75" x 3.15" x .7"). It can be worn on the waist, clipped to a purse or backpack, or dropped in a suit jacket pocket.

This device can log at various frequencies, can log all valid GPS points or only those valid points for which the speed is greater than one MPH (to screen out non-movement events), and has a 60,000 GPS point storage capacity. For the purpose of this study, the planned logging frequency was 4-second intervals with the speed screen activated. The standard GPS data stream elements recorded by the GlobalSat include date, time, latitude, longitude and speed. These elements are stored in the logger in standard NMEA units and are converted into user-specified units and formats upon download.

Figure 7: GlobalSat DG-100 GPS Data Logger



At the start of the study, 150 GlobalSat devices were provided to support deployment of 770 households over the planned year-long study period. An additional 62 devices were provided throughout the course of the study due to delayed returns and equipment losses (non-returns) from some households.

Deployment Procedures

Households were recruited into the travel survey at least 10 days prior to their assigned travel date. As GPS households were recruited, GeoStats pulled recruit details (such as names, addresses, phone numbers, and person rosters) daily. GeoStats imported this recruit information into its database. This recruit information was then available on the GPS Study Management website, where the GeoStats field deployment staff accessed the recruit information for their zone.

The deployment team member signed onto the password-protected website on a daily basis to review upcoming deployments. The lead time between the posting of recruited households to the website and the assigned travel date was at least seven days, allowing sufficient time to prepare the necessary documents, diaries, and equipment, and to ship them to arrive prior to the assigned travel date.

Simple printed instructions were shipped with the devices; these instructions also listed the assignment of each logger to each household member based on the logger identification number as well as a color-coded sticker. Households were reminded of the importance of using their diaries to record their travel for the assigned travel date. A return device sheet was also provided on which the household members were asked to record if they used the devices, and if not, to list the reason(s) why. Examples of the GPS device instructions and return sheets can be seen in Appendix I following the cover letter (these three pages were sent as a set with the equipment and diaries).

Shipping was conducted via FedEx. Participant instructions, equipment, diaries and a pre-paid return FedEx Pak were placed in a cardboard box and secured with packing material. The equipment was delivered to the household one to two business days prior to the assigned travel day. After the travel day, the participant was asked (in the instructions) to place all of the equipment and the return device sheet in the original box, to insert that box in the FedEx Pak, and to either put the package into a FedEx drop box or call 1-800-GoFedEx to schedule a pick-up at their home. Equipment was tracked on the FedEx website, with tracking information recorded on the GPS Study Management website. The participants were requested to hold onto their diaries, either reporting travel over the phone or returning the diaries in the pre-paid envelope provided with the diaries.

The deployment team member was instructed to prepare and ship equipment packages for each household listed. They were instructed to update the household deployment status on the website as the statuses changed. The default status for deployment when recruit information was first loaded was 'Recruit'. They could then change this status to reflect the current state of the deployment process; here is a list of all household deployment status codes:

- Recruited

- Shipped
- Deployed
- Complete (deployed and retrieved)
- Invalid Address
- Returned Refused (elected not to participate)
- Not Returned / Lost
- Over-recruit

The first four statuses reflect the natural progression of a successful deployment, whereas the final four statuses reflect GPS recruits that did not result in a useful deployment. The last status, Over-recruit, was used only if the address provided by the participant was non-deliverable (according to FedEx), and the participant could not be contacted for an alternative address. Three households were set to over-recruit in the full study, and therefore were not included in the data deliverable.

After receiving the returned equipment, the deployment staff downloaded the GPS data from the loggers and then cleared the device memory for redeployment. The downloaded, zipped GPS file was then posted to the project website and imported into the project database at the GeoStats office, where all further GPS data processing occurred. Deployment personnel were also responsible for updating the person-level equipment usage status fields as reported by each household and for recording any household or person-level comments on the website.

Deployment Results

Equipment was deployed (i.e., successfully delivered) to 780 households of the 784 households recruited into the study. GeoStats implemented an equipment retrieval management system in Microsoft Access and used this to coordinate follow up with all GPS households that did not immediately return their GPS equipment as instructed. First, a phone call was placed to the home telephone number for all households that did not return their GPS devices within one week after the last GPS travel date. When a person answered or an answering machine picked up, a message was delivered thanking the household for their participation and requesting that the GPS equipment be returned in the pre-paid FedEx envelope. A toll-free call back number was left if the household had any questions. If no person or answering machine was reached, additional calls were attempted.

If equipment still had not been returned by three weeks after the last GPS travel day, a letter was sent to the home. A second equipment retrieval letter was mailed to the household if equipment was still outstanding after five weeks. During the final week of the study, phone calls were made and letters were mailed simultaneously in an attempt to retrieve as much equipment as possible. An example of the letter sent as a reminder to households that did not return equipment after phone calls can be seen in Appendix I.

There were 49 households that did not return the GPS devices sent to them. In total, 102 GPS devices remain unreturned and are considered lost, which represents an equipment loss of 48 percent of the equipment inventory provided (212 total devices). (Some equipment loss was expected due to the mail-out/ship-back method, which was one reason for offering the $25 incentive.) Table 20 shows the final totals for each deployment disposition category once the study was complete.

Table 20: Recruitment and Deployment Statistics

Travel Week	Total Recruited	Deployed, Returned	Returned Refused	Returned Undeliverable	Not Returned Refused	Lost	Not Deployed
Total	784	695	32	4	9	40	3

Participation Results

Table 21 shows the results of the GPS component with respect to collecting both CATI and GPS data on the assigned travel date. CM stands for complete data collected from household.

Table 21: Participation Statistics

GPS Statistics					CATI Statistics		GPS & CATI Combined	
Recruited	Deployed	Returned	GPS CM	% CM	CATI CM	% CM	GPS & CATI CM	% GPS & CATI CM
784	780	695	605	78%	611	78%	506	65%

As seen in these tables, complete GPS and CATI data were collected from 506 households out of the 780 households deployed in this study; which is a 65 percent completion rate. A complete (GPS + CATI) household is defined as one in which CATI data was retrieved and GPS data were either collected from each instrumented person or, if not collected from a given person on the assigned travel date, then the CATI data confirmed no travel for that person.

Table 22 contains the overall data collection disposition of all households participating (deployed) in the GPS component. As seen in this table, there are other categories (or levels) of participation that are also useful for analysis. In fact, beyond the 506 GPS/CATI complete households, an additional 149 households collected complete or partial GPS data. Here is the breakdown of these households:

- 99 households collected complete GPS data but did not report their trips via CATI (therefore a total of 605 GPS Completes as listed in Table 21).
- 50 households collected GPS data for a subset of all instrumented persons, and all persons reported their trips via CATI.

Table 22: Disposition of GPS and Diary Retrieval Outcomes

Participation Outcome	Frequency	Percent
Complete (GPS + CATI)	506	64.8%
Full GPS data but no CATI data	99	12.8
Partial GPS data but no CATI data	0	0%
No GPS data but full CATI data*	54	6.9 %
Partial GPS and full CATI	50	6.4 %
No GPS data and no CATI data	71	9.1%
Total	780	100.0%

* There was one household which reported travel (CATI), but was not deployed with GPS. Therefore, the CATI total here is 610 (506+54+50), while the CATI Complete total in Table 21 is 611.

If the GPS/CATI complete total and the GPS complete/No CATI total are combined, this yields a 77.6 percent GPS data collection completion rate. The original target goal of 65 percent for GPS/CATI completes was also met.

GPS / Diary Processing Methods and Results

Of the 506 GPS / CATI complete households, 482 households had all members collect both GPS and CATI data on their assigned travel date. The 998 persons in those 482 households were used for the missed trip analysis and matching results. These persons reported a total of 5477 trips on the assigned travel day. The

GPS devices collected a total of 5899 trips from these same persons. All information contained in this section pertains to these 482 households only.

Reporting Exceptions

In some household travel surveys, work-related trips (i.e., commercial use of personal auto) and external to external trips (i.e., those that have origins and destinations outside of the planning regions) are not reported in the travel diary and not collected during the retrieval call. These were the instructions for this pretest study as well. However, of the 187 external to external GPS trips GeoStats detected in the GPS/CATI complete households, 147 of these trips was reported. Similarly, of the 447 work-related GPS trips GeoStats found in these households, 268 had been reported. This left a total of 40 external-external trips and 179 work-related trips found in the GPS data that had not been reported (and were not required to be reported).

GeoStats flagged GPS trips as loop trips whenever a GPS trip was detected in which the origin and destination were the same location. According to the rules of this study, loop trips should have reported whenever their purpose (e.g., exercise or walk the dog) was not tied to the purpose of the previous trip. This means that a loop trip made from home is a valid trip whereas a loop walk trip in a park preceded by a drive to the park for exercise purposes should not have been reported. GeoStats found a total of 150 loop trips, 95 of which were reported by participants. Furthermore, GeoStats found 293 other non-transportation or on-site trips that were not required to be reported.

To account for these reporting rules and discrepancies, GeoStats provided two versions of the missed trip analysis at the end of this section – one that includes all reporting exceptions and one that excludes these exceptions.

Matching Results – Wearable GPS Households

The results of the trip matching process fell into the following three categories:

100 Percent Matched Trips. Any person instrumented with GPS that captured the same GPS trips as reported in CATI were considered to be a perfect match. This category also includes 61 persons who reported no travel and for which there were no GPS trips recorded.

Of all trips made by the 998 instrumented persons included in this analysis, 402 persons had perfect matches between the CATI and GPS trip data. The breakdown of this number includes the 61 persons who did not travel and 341 persons who made at least one trip. This represents a perfect match (or reporting rate) for 40.3 percent of all instrumented persons and 1758 of the 5477 CATI-reported trips (32.1 percent). Table 23 contains the trip frequency statistics for the persons included in this category.

Table 23: Trip Frequencies for Perfect Matches at Person Level

# Trips	Frequency	Percent	Cumulative Percent
0	61	15.2%	15.2%
1	2	0.5%	15.7%
2	63	15.7%	31.3%
3	41	10.2%	41.5%
4	63	15.7%	57.2%
5	46	11.4%	68.7%
6	40	10.0%	78.6%
7	32	8.0%	86.6%

# Trips	Frequency	Percent	Cumulative Percent
8	12	3.0%	89.6%
9	10	2.5%	92.0%
10	12	3.0%	95.0%
11	10	2.5%	97.5%
12	2	0.5%	98.0%
13	3	0.7%	98.8%
14	0	0.0%	98.8%
15	2	0.5%	99.3%
16	1	0.2%	99.5%
17	0	0.0%	99.5%
18	2	0.5%	100.0%
Totals	402	100.0%	100.0%

GPS Trip Not Detected but CATI Trip Reported. The second comparison identifies CATI trips that had no corresponding GPS trips. During the matching process, 702 CATI trips were identified that had no corresponding GPS trip (or 10.6 percent of all GPS trips). This typically happens when respondents place the GlobalSat device in a position in which it cannot receive GPS satellite signals (such as in a purse or backpack) or forget to confirm that it is powered on. A few participants noted that the device may not have been powered throughout the travel day (e.g., they forgot to check to see if the power light was on).

GPS Trip Detected but No CATI Trip Reported. The last category in the matching process contains those cases where trips were identified within the GPS data stream but not within the CATI data. There were 1125 "missing" CATI trips identified as a result of the trip matching process (for a missing diary (or CATI) trip rate of 17.0 percent. If we exclude any reporting exceptions detected during GPS data processing, this number reduces to 724 missing trips, for a 11.7 percent missing trip rate. The section on the missed trip research process and results provides additional information about these missing trips.

Table 24 shows the frequency of missing GPS trip counts and CATI trip counts detected for the 596 persons who were not perfect matches. For example, there were 139 persons missing one GPS trip and 185 persons missing one CATI trip (172 if reporting exceptions are excluded). On the higher end of the spectrum, there was one participant missing 12 GPS trips and two persons missing 24 CATI trips. Once reporting exceptions are excluded, the highest number of missing CATI trips decreased to 12. It should also be noted that some participants could be missing both GPS and CATI trips.

Table 24: Trip Frequencies for Missing GPS and Missing Diary Trips

# Missing Trips	GPS Frequency	CATI Frequency (with exceptions)	CATI Frequency (without exceptions)
0	692	587	650
1	138	182	171
2	82	87	82
3	31	58	46
4	17	30	21
5	18	19	15
6	9	10	6
7	3	4	5

# Missing Trips	GPS Frequency	CATI Frequency (with exceptions)	CATI Frequency (without exceptions)
8	3	7	0
9	3	2	1
10	0	2	0
11	1	2	0
12	1	2	1
13	0	0	0
14	0	0	0
18	0	1	0
19	0	2	0
24	0	2	0

Overall Matching Results

As reported previously, the CATI data contained 5477 person trips while the GPS equipment captured 5899 trips. However, at the individual person level, a total of 1125 missing CATI trips were detected (724 trips when reporting exceptions are excluded). The overall adjusted missed trip rate is 11.7 percent for the GPS / CATI complete sample (724 missing CATI trips divided by the sum of the 724 missing trips and the 5477 reported trips).

The overall missed trip rate of 11.7 percent is very consistent with findings in other recent studies, including Baltimore, Washington DC, Chicago, Indianapolis, Denver, and Atlanta. Additional analyses of unreported trips should be performed to gain insight into the types of trips that are typically unreported (as shown in the Missed Trip Research Section) as well as of the person-level and household-level demographics and travel patterns that contribute to trip under-reporting. It is important to note that these analyses are needed to generate targeted trip rate correction factors; it is not advisable to use the overall missed trip rate as a correction factor for an entire sample.

Link Matching

Another task included in the GPS component of this study was link matching the GPS points confirmed as valid trips to GIS spatial layers. Consequently, upon completion of the GPS trip review process, the files were run though a link matching routine. This routine compared GPS point sequences with linear spatial databases representing different elements from the study area's transportation infrastructure.

Process Description

The algorithm used to perform the matching was based on the one proposed by Marshal, Hackney, and Axhausen,[2] with the added feature of performing shortest network path on gaps found in the final routes.[3] The spatial layers used in this process were obtained from MassDOT in ESRI Shapefile format, prior to processing they were imported into PostGIS for more efficient access by the matching routine. The layers were stored using the NAD83(HARN) / Massachusetts Mainland projection. Table 25 lists the layers to which GPS points were matched based on the travel modes they were associated with in TIAS. Note that a given set of points can be matched to more than one layer.

[2] F. Marchal, J. Hackney, K. W. Axhausen, Efficient Map Matching of Large Global Positioning System Datasets: Tests on Speed-Monitoring Experiment in Zürich, Transportation Research Record: Journal of the Transportation Research Board, Transportation Research Board of the National Academies, 2006.

[3] Shortest path computations were only performed on routes built using the Navteq street network layer, which was provided by the client.

Table 25: List of Travel Modes included in Matching Process

Layer Name	Label Field	Travel Mode (Mode ID)
navteq_streets_topo	link_uid	Walk (1), Auto / Van / Truck Driver (3), Auto / Van / Truck Passenger (4), Dial-a-Ride / Paratransit (6), Taxi (7), School Bus (8), Motorcycle Driver (9), Motorcycle Passenger (10), Local Bus (81), Express Bus (82), Shuttle Bus (83)
bike_trails	gid*	Bike (2)
transit_routes	gid	Local Bus (81)
silver_line	gid	Express Bus (82)
mta_rapid_transit_rail_line_subway, rapid_transit_lines	gid	Subway (84)
passenger_trains_lines	gid	Commuter Rail (85)

Spatial operations were performed in the layer's original local projection with GPS coordinates projected on the fly. The match tolerance was set at 25 meters for the Navteq street layer and 75 meters for all other layers to account for the fact that non-auto modes tend have poorer positional quality. The result of this process is a set of two tables, GPSLINKS and GPSLINKSNAPS. The first one has one record for each link matched to a given trip, while the second one contains the resulting snapped coordinates.

Snapped coordinates were computed by intersecting a line perpendicular to the point's trajectory with the route's links. The resulting intersection's coordinates were un-projected to WGS84 decimal degrees and saved to the database. Linear referencing measurements were computed by measuring the distance along the routes' individually matched segments to the point snaps, results were saved in the local projection's measurement unit (meters).

Data Weighting and Expansion

As discussed earlier, the sample design was crafted to enable the collection of data from a representative and randomly selected sample of households from the region. Demographic and geographic targets were used to guide data collection with the goal of having a final dataset that reflected the ACS 2006–2010 population proportions. Although the sample was randomly selected, not all sampled households agreed to participate, nor did all households that agreed to participate actually complete the study. This resulted in a non-response bias in the dataset.

To correct for this, the final dataset includes two analytical weights, computed at the household and person levels. These weights;

1) Adjust the relative importance of responses to reflect the different probabilities of selection of respondents,
2) Adjust for bias associated with the high probability of selection associated with cell phone sample households that have more than one cell phone,
3) Adjust for households that do not own landlines, and
4) Align the sample distributions to population distributions, thereby improving coverage and precision.

From a finite population sampling theory perspective, analytic weights are needed to develop estimates of population parameters and, more generally, to draw inferences about the population that was sampled. Without the use of analytic weights, population estimates are subject to biases of unknown (and possibly large) magnitude. Consequently, analytic weights are crucial to obtain survey estimates with minimal bias.

The weighting approach used in this study accounts for the biases associated with sampling, telephone ownership, and robustness of the data collected. Specifically, the components of the analytic weights generated are as follows:

- Sampling weights,
- Raking adjustments.

The analytic weights were computed at the household and person level. These weights adjusted the relative importance of responses to reflect the different probabilities of selection of respondents, and align the sample distributions to population distributions.

Household Weight

Sampling Weight

The sampling weight reflects the probability of selection of a telephone number or an address from the sampling frame. Considering the dual-frame sampling framework employed in this study, separate sampling weights were calculated for the listed residential and address-based sampling frames. Specifically, the sampling weight for a sampling unit j in the sampling frame, denoted as $W_{j,SampFr}$, is simply the reciprocal of the selection probability of the sampling unit.

$$W_{j,SampFr} = \frac{1}{\text{Prob}_{j,SampFr}}$$

where,

- ✓ Sampling unit j is a landline number in the listed residential frame and an address in the address-based sampling frame.
- ✓ Sampling frame $_{SampFr}$ is listed residential or address-based sampling frame.

The sampling weights also adjusted for oversampling of specific geographies or demographic groups of interest, for which we had implemented controls to make sure that we had adequate observations in these groups. To illustrate, the sampling weight associated with address-based sample was simply computed as the number of addresses in the address-based frame divided by number of sample pieces ordered from the frame for the study area. It is important to note that the adjustments for oversampling were made at the aggregate level of the sampling frame type (instead of a specific geography).

Raking Adjustment

Raking improves the reliability of the survey estimates; hence, raking adjustments were used to align the weighted sample to population statistics from 2006–2010 ACS data. These adjustments were made using raking variables. In particular, the aforementioned weights were adjusted so that the sums of the adjusted weights were equal to known population totals for certain subgroups of the population defined by demographic characteristics and geographic variables. The variables used for raking at the household level are as follows:

- Household size,
- Household income,
- Total number of workers in the household,
- Total number of vehicles in the household, and
- MPO of residence.

These variables were chosen as the raking variables due to significant differences in the coverage by categories of these variables. Therefore, it is reasonable to expect that maximum bias reduction would be achieved using these variables. It is important to note that the missing values in the raking variables were imputed to calculate the raking adjustments.

The raking procedure is based on an iterative proportional fitting (IPF) procedure and involves simultaneous ratio adjustments to two or more marginal distributions of the population counts. The raking procedure is undertaken in a sequence of adjustments. First, the base weights are adjusted to one marginal distribution and then to the second marginal distribution, and so on. One sequence of adjustments to the marginal distributions is known as a cycle or iteration. The procedure is repeated until convergence is achieved. Following the raking procedure, the inordinately large weights, a by-product of raking, were capped. In particular, the "very large" weights were capped to equal a maximum of five times the mean weight.

Table 26 shows the sample and population distribution by demographic and geographic raking variables for the study area. A comparison of the unweighted difference and weighted difference between the survey data and the ACS indicates that the raking procedure has aligned the sample statistics to the population statistics. Note that the table uses the imputed recoded data where households refused one of the raking variables.

Table 26: Raking Adjustment at Household Level

Raking Variable	2006-2010 ACS	Weighted Data		Difference (% pts)	
		Before Raking	After Raking	Before Raking	After Raking
Household Size					
1	28.9%	27.4%	28.9%	-1.50%	0.00%
2	32.1%	32.1%	32.1%	0.00%	0.00%
3	16.1%	16.9%	16.1%	0.80%	0.00%
4 or more	22.8%	23.6%	22.8%	0.80%	0.00%
Household Vehicles					
0	12.2%	10.2%	12.2%	-2.00%	0.00%
1	35.7%	31.4%	35.7%	-4.30%	0.00%
2	37.1%	39.1%	37.1%	2.00%	0.00%
3 or more	15.0%	19.3%	15.0%	4.30%	0.00%
Workers in Household					
0	25.5%	23.5%	25.5%	-2.00%	0.00%
1	36.4%	34.8%	36.4%	-1.60%	0.00%
2	30.2%	33.9%	30.2%	3.70%	0.00%
3 or more	7.8%	7.7%	7.8%	-0.10%	0.00%
Household Income					
Less than $25000	20.4%	16.9%	20.4%	-3.50%	0.00%
$25,000–$49,999	19.2%	16.0%	19.2%	-3.20%	0.00%
$50,000–$99,999	30.5%	29.5%	30.5%	-1.00%	0.00%
$100,000-$149,999	16.4%	23.6%	16.4%	7.20%	0.00%
$150,000 or more	13.4%	14.1%	13.4%	0.70%	0.00%
MPO of Residence					
Berkshire	2.2%	2.0%	2.2%	-0.20%	0.00%
Cape Cod	3.9%	3.3%	3.9%	-0.60%	0.00%
Central Mass.	8.5%	7.6%	8.5%	-0.90%	0.00%
Franklin	1.2%	1.7%	1.2%	0.50%	0.00%
Boston	48.0%	51.0%	48.0%	3.00%	0.00%

Raking Variable	2006-2010 ACS	Weighted Data		Difference (% pts)	
		Before Raking	After Raking	Before Raking	After Raking
Montachusett	3.3%	3.5%	3.3%	0.20%	0.00%
Martha's Vineyard	0.2%	0.2%	0.2%	0.00%	0.00%
Merrimack	4.9%	4.7%	4.9%	-0.20%	0.00%
Northern Middlesex	4.0%	4.3%	4.0%	0.30%	0.00%
Nantucket	0.1%	0.2%	0.1%	0.10%	0.00%
Old Colony	4.9%	3.7%	4.9%	-1.20%	0.00%
Pioneer Valley	9.4%	9.9%	9.4%	0.50%	0.00%
Southeastern Mass.	9.4%	7.9%	9.4%	-1.50%	0.00%
Total	2,512,552	15033	15033	-1.50%	0.00%

Final Household Weight

The final analytic weight is simply the product of sampling weight and raking adjustment. Following the computation of this weight, an expansion procedure was undertaken to get the final 'expanded' analytic weight. The expansion process simply takes the weighted total households and multiplies each household by a factor, when applied, expands the data to represent the universe of households in the study area. To derive the expansion factor, a simple division was used: Expansion Factor = N(Universe)/ N(Surveyed).

Person Weight

The person weight is a product of the final household weight and the person-level raking weight. Specifically, the person data weighted by the 'final household weight' was raked to align it to the population statistics from 2006–2010 ACS data. The raking procedure is based on an iterative proportional fitting procedure. The variables used for raking at the person level are Hispanic Status/Ethnicity and Age.

Following the raking procedure, the very large weights were capped. The weights were then expanded to reflect the total number of persons residing in the study area. The final person weight is the product of household weight and raking adjustment at the person level.

Table 27 shows the sample and population distribution by the aforementioned raking variables. A comparison of the unweighted difference and weighted difference between the survey data and the 2006–2010 ACS indicates that the raking procedure has aligned the sample statistics to the population statistics. This weight was expanded to represent the total population in the study area.

Table 27: Raking Adjustment at Person Level

Raking Variable	2006-2010 ACS	Weighted Data		Difference (% pts)	
		Before Raking	After Raking	Before Raking	After Raking
Hispanic Status/Ethnicity					
Hispanic	9.3%	5.2%	9.3%	-4.10%	0.00%
Non-Hispanic-white	76.8%	86.3%	76.8%	9.50%	0.00%
Non-Hispanic Other	13.8%	8.5%	13.8%	-5.30%	0.00%
Age					
Under 20 years	25.2%	25.3%	25.2%	0.10%	0.00%
20–34 years	19.9%	10.8%	19.9%	-9.10%	0.00%
35–54 years	29.6%	32.6%	29.6%	3.00%	0.00%
55–64 years	11.7%	19.6%	11.7%	7.90%	0.00%
65 years and over	13.5%	11.7%	13.5%	-1.80%	0.00%
Total	6,470,619	37023	37023		

Limitations of the Survey

Limitations and Impact on Data

Response Rate and Survey Non-Response. Some level of non-response occurs in every voluntary survey. Low response rates are attributable to a variety of factors, including growing resistance among U.S. householders to surveys in general and telephone surveys in particular; the changing patterns of telephone access in American households; and the growing number of households in which English is not a first language—making telephone communication for survey respondents who are not native English speakers difficult.[4] Household travel surveys are particularly susceptible to non-response. These surveys are complex, requiring a two-stage interview process plus the completion of a travel diary by all household members. Since each interview stage has an accompanying level of non-response, the overall response rate is the product of a recruitment rate and a retrieval rate.

Under-Reporting of Trips. An important determinant of data quality is the accuracy of the reported trips. To enhance reporting accuracy, most household travel surveys rely on travel diaries, in which respondents are asked to record each trip for a specific time period (e.g., 24 hours). Yet even with the use of diaries, under-reporting of trips by survey respondents is a well-documented occurrence. Memory decay, failure to understand or to follow survey instructions, unwillingness to report full details of travel, and simple carelessness all contribute to the incomplete collection of travel data. After the data have been weighted and expanded, the trip rates are assessed relative to prior surveys and other metropolitan areas.

Response Bias. Surveys are prone to non-response errors because certain types of households selected in a sample do not participate in surveys or individual household members fail to answer an item in an interview.

Recommendations for Study Improvement

Travel behavior study innovations are in continuous development by various research organizations. Sponsors typically focus concerns on multiple elements relevant to their existing or planned models. Future studies should consider each element and weigh the importance by priority and financial investment. The indexing of priority, innovation, value, and cost is a difficult task, even for experienced model coordinators.

Hispanic Outreach: Despite targeted sampling, response from Hispanic households was low. Based on recent household travel survey experience in large metropolitan areas, it is believed that robust public outreach efforts involving the sponsoring agency and the research firm are necessary in order to effectively communicate and generate interest with Hispanic communities. Public outreach efforts should include press releases through community new media and messaging efforts through community leaders, with the sponsoring agency providing the local presence and expertise.

Non-Response Follow-Up. Conducting in-person non-response efforts can increase the quality of the study and decrease coverage bias. In-person interviews tend to be more expensive in cost. However, conducting a limited non-response effort can allow for bias correction, through weighting the difference in travel behavior from those that originally participate.

[4] The survey was designed to include English and Spanish speakers only.

Survey Results

The 15,033 households that participated in the Massachusetts Travel Survey had many characteristics in common. All were willing to take the time to record their travel and provide demographic information about their households. These households provided data about their household composition, housing type and ownership, and income. They provided details about their 37,023 household members, including age, gender, disability status, and employment and student status. They divulged the year, make, and model for each of their 26,488 vehicles. In addition, they willingly provided trip destinations, travel times, travel modes, and the reasons for visiting 190,215 places during their respective 24-hour period. In all, the households reported an average of 10.2 daily household trips and 4.1 daily person trips.

The purpose of this section is to summarize the characteristics of participating households and understand the ways in which they are similar and how they vary, at both the person and the household level. These differences are important in understanding their travel behavior, which is presented in the second section of this chapter. Details about their trip characteristics comprise the third section, followed by a more detailed look at mode choice and travel times reported by respondents, including travel destinations during specific time periods.

Household Characteristics

As shown in Table 28, Nearly one-third of all households surveyed reported having two household members; another 29 percent of households reported only one household member.

Table 28: Household Size (Weighted)

Household Size	Count	Percent
1	727048	28.9%
2	807743	32.1%
3	403832	16.1%
4	389256	15.5%
5	142149	5.7%
6	32534	1.3%
7	6753	0.3%
8 or more	3237	0.1%
Total	2512552	100.0%

The majority of households (72 percent) reported they do not use transit on a regular basis, as shown in Table 29.

Table 29: Transit Used on Regular Basis (Weighted)

Transit Used on Regular Basis	Count	Percent
Yes	710060	28.3%
No	1801000	71.7%
DK	1491	0.1%
Total	2512552	100.0%

Overall, just over half of all households (56 percent) reported having at least one household bicycle; of those, 18 percent reported having two bicycles available to the household, and 16 percent reported one bicycle. On the other hand, 44 percent of households reported not having a household bicycle. See Table 30 for more detail.

Table 30: Household Bicycles (Weighted)

Household Bicycles	Count	Percent
0	1092463	43.5%
1	410116	16.3%
2	448577	17.9%
3	221518	8.8%
4	193676	7.7%
5	80431	3.2%
6	37033	1.5%
7	11570	0.5%
8	14887	0.6%
DK	2281	0.1%
Total	2512552	100.0%

Thirty-seven percent of households reported having two vehicles available to the household, 36 percent reported having one vehicle available, while 12 percent reported having no vehicles (see Table 31).

Table 31: Household Number of Vehicles (Weighted)

Household Vehicles	Count	Percent
0	307472	12.2%
1	895898	35.7%
2	931730	37.1%
3	256939	10.2%
4	80755	3.2%
5	27223	1.1%
6	8677	0.3%
7	1896	0.1%
8 or More	1961	0.1%
Total	2512552	100.0%

Regarding ethnicity of the participating households (Table 32), the majority (86 percent) reported White Alone, nearly 5 percent reported Black or African American Alone, while 4 percent reported Some Other Race Alone.

Table 32: Household Ethnicity (Weighted)

Household Ethnicity	Count	Percent
White Alone	2160929	86.0%
Black or African American Alone	114230	4.5%
American Indian or Alaskan Native Alone	6784	0.3%
Asian Alone	46785	1.9%
Native Hawaiian, Pacific Islander Alone	1626	0.1%
Some Other Race Alone	105500	4.2%
Two or More Races	50292	2.0%
Refused	26405	1.1%
Total	2512552	100.0%

Overall participation of Hispanic or Latino households in the survey was nearly 6 percent, as shown in Table 33.

Table 33: Hispanic or Latino Households (Weighted)

Hispanic or Latino Household	Count	Percent
Yes	137733	5.5%
No	2360496	93.9%
RF	14323	0.6%
Total	2512552	100.0%

Shown in Table 34, 63 percent of all households reported living in a Single Family Detached Dwelling, followed by a Building with 2–4 Units (nearly 20 percent), a Building with 5–19 Units (8 percent), and a Building with 20 or More Units (also at 8 percent).

Table 34: Household Residence Type (Weighted)

Household Residence Type	Count	Percent
Single Family Detached Dwelling	1591042	63.3%
Building with 2-4 Units	489639	19.5%
Building with 5-19 Units	212156	8.4%
Building with 20 or More Units	209147	8.3%
Something Else	5671	0.2%
DK	1683	0.1%
RF	3213	0.1%
Total	2512552	100.0%

Seventy-three percent of households reported they own their homes, while 27 percent reported that they rent. See Table 35 for more detail.

Table 35: Ownership of Household Residence (Weighted)

Home Ownership	Count	Percent
Own/Mortgaged	1839664	73.2%
Renter	667080	26.5%
Other, Specify	2536	0.1%
DK	1778	0.1%
RF	1494	0.1%
Total	2512552	100.0%

Thirty-six percent of households have two cell phones in the household, 31 percent have one cell phone, while another 14 percent have three cell phones. Also shown in Table 36, nearly 9 percent reported having no cell phones.

Table 36: Cell phone lines in Household (Weighted)

Cell Phones in Household	Count	Percent
0	222006	8.8%
1	779823	31.0%
2	892893	35.5%
3	345062	13.7%
4	207193	8.2%
5	50157	2.0%
6	7323	0.3%
7	1117	0.0%
8	1160	0.0%
9	107	0.0%
DK	2268	0.1%
RF	3441	0.1%
Total	2512552	100.0%

As shown in Table 37, 99 percent of participating households have landline telephone service. Less than 1 percent reported not having a landline connection.

Table 37: Landlines in Household (Weighted)

Landlines in Household	Count	Percent
0	21295	0.8%
1	2307534	91.8%
2	145370	5.8%
3	26571	1.1%
4	5343	0.2%
5	1787	0.1%
6	975	0.0%
8	208	0.0%
10	184	0.0%
DK	1425	0.1%
RF	1861	0.1%
Total	2512552	100.0%

Regarding household income distribution, 16 percent reported making $15,000–$34,999 annually, another 16 percent reported making $50,000–$74,999 annually, while 14 percent report making $75,000–$99,999 annually. Thirteen percent of households fall within the highest income category ($150,000 or more) while a comparative 12 percent fall within the lowest income category (less than $15,000). See Table 38 for more information.

Table 38: Household Income (Weighted)

Household Income	Count	Percent
Less than $15,000	299314	11.9%
$15,000-$24,999	213980	8.5%
$25,000-$34,999	195841	7.8%
$35,000-$49,999	286397	11.4%
$50,000-$74,999	412466	16.4%
$75,000-$99,999	354862	14.1%
$100,000-$149,999	290100	11.5%
$150,000 or more	337531	13.4%
Don't Know/Refused	122062	4.9%
Total	2512552	100.0%

As shown in Table 39, on their travel day, 29 percent of households made 6–10 trips, while another 29 percent made fewer (1–5) trips. Seventeen percent made 11–15 trips, 10 percent made 16–20 trips, and another 10 percent of households made at least 21 trips on their travel day. Nearly 5 percent of household reported making no trips.

Table 39: Trips Made by Household on Travel Day (Weighted)

Trips Made by Household on Travel Day	Count	Percent
None	117549	4.7%
1 to 5	721970	28.7%
6 to 10	734918	29.2%
11 to 15	428671	17.1%
16 to 20	251205	10.0%
21 to 30	202945	8.1%
31 to 50	52714	2.1%
50+	2581	0.1%
Total	2512552	100.0%

As summarized in Table 40, the majority of households (63 percent) reported having no students in the household. Of those households that did, 17 percent reported 1 student, 13 percent reported 2 students, and 5 percent reported 3 students.

Table 40: Household Students (Weighted)

Household Students	Count	Percent
0	1589998	63.3%
1	423061	16.8%
2	336048	13.4%
3	130475	5.2%
4	26781	1.1%
5	5830	0.2%
6	360	0.0%
Total	2512552	100.0%

Two-thirds of all households reported having one or two workers in the household, while 6 percent reported having at least three workers. Conversely, 26 percent of households reported having no workers within the household. See Table 41 for more information.

Table 41: Household Workers (Weighted)

Household Workers	Count	Percent
0	641650	25.5%
1	915403	36.4%
2	759429	30.2%
3	155176	6.2%
4	35133	1.4%
5	5423	0.2%
6	337	0.0%
Total	2512552	100.0%

Table 42 summarizes that nearly half of all households reported having two licensed drivers in the household, while another 33 percent reported having one licensed driver. Seven percent reported having no licensed drivers.

Table 42: Licensed Drivers in Household (Weighted)

Licensed Drivers in Household	Count	Percent
0	178392	7.1%
1	821724	32.7%
2	1201859	47.8%
3	233449	9.3%
4	65762	2.6%
5	9641	0.4%
6	1582	0.1%
7	143	0.0%
Total	2512552	100.0%

Table 43 shows the final distribution of households across the days of the week. As is shown, households were distributed nearly equally across the days of the week.

Table 43: Distribution of Households by Day of Week of Travel (Weighted)

Day of Week of Travel	Count	Percent
Monday	524703	20.9%
Tuesday	500912	19.9%
Wednesday	494735	19.7%
Thursday	482082	19.2%
Friday	510120	20.3%
Total	2512552	100.0%

As Table 44 indicates, overall, distribution by day of week of travel was roughly even, even across the multiple years of data collection. Friday travel days were over-recruited in 2011 in order to compensate for lower response rates of Friday travelers in 2010.

Table 44: Distribution of Households by Day of Week of Year of Travel (Weighted)

Year	Day of Week of Travel	Count	Percent
2010	Monday	274451	10.9%
	Tuesday	256973	10.2%
	Wednesday	249816	9.9%
	Thursday	243299	9.7%
	Friday	240566	9.6%
	Monday	250253	10.0%
	Tuesday	243939	9.7%
	Wednesday	244918	9.7%
	Thursday	238783	9.5%
	Friday	269553	10.7%
	Total	2512552	100.0%

Distribution by month of year of travel is shown in Table 45. Due to the occurrence of two fall data collection phases, there are more households from those months.

Table 45: Distribution of Households by Month of Year of Travel (Weighted)

Year	Month of Year of Travel	Count	Percent
2010	June	125251	5.0%
	July	244190	9.7%
	August	258163	10.3%
	September	218371	8.7%
	October	178178	7.1%
	November	123601	4.9%
	December	117353	4.7%
2011	January	127609	5.1%
	February	98825	3.9%
	March	162577	6.5%
	April	186356	7.4%
	May	168924	6.7%
	June	208199	8.3%
	July	64491	2.6%
	September	134313	5.3%
	October	96151	3.8%
	Total	2512552	100.0%

Person Characteristics

The majority of survey respondents (53 percent) are female, as shown in Table 46.

Table 46: Respondent Gender (Weighted)

Respondent Gender	Count	Percent
Male	3056017	47.2%
Female	3411842	52.7%
Refused	2760	0.0%
Total	6470619	100.0%

The overall age distribution is presented in Table 47. As is shown, 29 percent of respondents are between the ages of 35 and 54, 25 percent are younger than 20 years of age, while 20 percent are between the ages of 20 and 34. Fourteen percent are at least 65 years of age, while 11 percent are between the ages of 55 and 64.

Table 47: Age Distribution (Weighted)

Age Distribution	Count	Percent
Younger than 20	1601580	24.8%
20 to 34 years	1278683	19.8%
35 to 54 years	1865589	28.8%
55 to 64 years	735931	11.4%
65 years or older	872768	13.5%
Refused Age	116068	1.8%
Total	6470619	100.0%

As indicated in Table 48, the majority of survey respondents (85 percent) reported having a valid driver's license.

Table 48: Valid Driver's License (Weighted)

Valid Driver's License	Count	Percent
Yes	4400916	85.1%
No	764421	14.8%
Don't Know	3557	0.1%
Refused	2399	0.0%
Total	5171293	100.0%

Only one-quarter of all respondents reported having a transit pass; the remaining 75 percent reported not having a transit pass. The distribution is reported in Table 49.

Table 49: Respondent has Transit Pass (Weighted)

Respondent has Transit Pass	Count	Percent
Yes	1266763	24.5%
No	3878327	75.0%
Don't Know	25040	0.5%
Refused	1162	0.0%
Total	5171293	100.0%

Table 50 presents the type of transit pass that respondents reported having. Of those who reported having a transit pass, 56 percent use the Charlie Card, 13 percent use some other, unspecified, type of transit pass, 10 percent use the Link Pass, 10 percent use a Local Bus Pass, while 8 percent use the Commuter Rail Pass. The least common types of passes are the Inner and Outer Express Bus Passes and the Ferry/Board Pass (all less than 1 percent).

Table 50: Transit Pass Type (Weighted)

Transit Pass Type, Multiple Response	Count	Percent
Local Bus Pass	121656	9.6%
Link Pass	129118	10.2%
Inner Express Bus Pass	3920	0.3%
Outer Express Bus Pass	714	0.1%
Commuter Rail Pass	95805	7.6%
Ferry / Board Pass	3047	0.2%
Charlie Card	704902	55.6%
Other, specify	168296	13.3%
Don't Know	31194	2.5%
Refused	10178	0.8%
Total	1268830	100.0%

Table 51 summarizes worker status. Of the respondents within the study area, 62 percent reported being employed.

Table 51: Worker Status, Computed (Weighted)

Worker Status, Computed	Count	Percent
Yes	3224601	62.4%
No	1946692	37.6%
Total	5171293	100.0%

Of the 38 percent of respondents within the study area who reported being unemployed (see Table 51), 38 percent are retired, 16 percent are students, 16 percent are disabled, 14 percent are looking for work, while 13 percent are homemakers, as indicated in Table 52.

Table 52: Employment Status, Non-workers (Weighted)

Employment Status, Non workers	Count	Percent
Retired	740937	38.1%
Disabled/On Disability Status	301901	15.5%
Homemaker	245729	12.6%
Unemployed but looking for work	270349	13.9%
Unemployed and not looking for work	49721	2.6%
Student	317361	16.3%
Other, specify	9765	0.5%
Refused	10929	0.6%
Total	1946692	100.0%

As summarized in Table 53, respondents within the study area average working 1.11 jobs each.

Table 53: Average Number of Jobs (Weighted)

Jobs	Average
Average Number of Jobs	1.11

Regarding the number of hours workers average per day, 43 percent work eight hours a day. Eleven percent work ten hours a day, while 10 percent work nine hours a day. Refer to Table 54 for more detail.

Table 54: Hours Worked per Day (Weighted)

Hours Worked per Day	Count	Percent
1	21506	0.7%
2	48136	1.5%
3	79283	2.5%
4	172651	5.4%
5	172784	5.4%
6	206260	6.4%
7	200631	6.2%
8	1399643	43.4%
9	330899	10.3%
10	353648	11.0%
11	32679	1.0%

Hours Worked per Day	Count	Percent
12	107188	3.3%
13	6873	0.2%
14	11431	0.4%
15	4921	0.2%
16	7339	0.2%
17	517	0.0%
18	626	0.0%
20	3465	0.1%
22	81	0.0%
23	137	0.0%
24	5554	0.2%
Don't Know	45108	1.4%
Refused	13242	0.4%
Total	3224601	100.0%

As shown in Table 55, the majority of respondents (68 percent) work a typical five-day work week, while 10 percent average working four days a week. Eight percent work three days a week, and 7 percent work six days a week.

Table 55: Respondent Average Number of Days Worked Per Week (Weighted)

Days Worked Per Week	Count	Percent
1	50519	1.6%
2	116144	3.6%
3	242915	7.5%
4	319291	9.9%
5	2194908	68.1%
6	214203	6.6%
7	77370	2.4%
Don't Know	6971	0.2%
Refused	2280	0.1%
Total	3224601	100.0%

Table 56 summarizes telecommute status of workers. Of the respondents who work, 22 percent telecommute.

Table 56: Telecommute Status (Weighted)

Worker Telecommutes	Count	Percent
Yes	694912	21.6%
No	2473252	76.7%
Don't Know	52388	1.6%
Refused	4048	0.1%
Total	3224601	100.0%

As shown in Table 57, of those who work, 23 percent are offered a flexible work program at work, 72 percent are not offered a flexible work schedule, while 5 percent do not know if this is an option for them or not.

Table 57: Flexible Work Program Offered at Work (Weighted)

Flexible Work Program Offered at Work	Count	Percent
Yes	738870	22.9%
No	2313130	71.7%
Don't Know	168175	5.2%
Refused	4425	0.1%
Total	3224601	100.0%

For those who are offered a flexible work program at work, 35 percent are offered early arrival/departure, 22 percent are offered flexible hours, 15 percent are offered some other type of program, 8 percent are offered the 4/40 work week, and 6 percent are offered the 9/80 work period. Refer to Table 58 for more detail on flexible work programs offered.

Table 58: Type of Flexible Work Programs Offered, Multiple Response (Weighted)

Type of Flexible Work Programs Offered, Multiple Response	Count	Percent
9/80 Work Period	47241	6.1%
Early Arrival/Departure	268127	34.7%
4/40 Work Week	63992	8.3%
Flexible Hours	167448	21.7%
Other, Specify	115041	14.9%
Don't Know	90677	11.7%
Refused	19210	2.5%
Total	771735	100.0%

Table 59 summarizes whether workers participate in flexible work programs. For those who are offered a flexible work program at work, 81 percent participate in one of the programs offered to them; 17 percent do not participate.

Table 59: Respondent Participates in Flexible Work Program (Weighted)

Respondent Participates in Flexible Work Program	Count	Percent
Yes	598287	81.0%
No	122739	16.6%
Don't Know	17227	2.3%
Refused	618	0.1%
Total	738870	100.0%

Ninety-four percent of respondents reported not having a disabled license plate, while 5 percent reported having a disabled license plate. See Table 60 for this summary.

Table 60: Disabled License Plate (Weighted)

Disabled License Plate	Count	Percent
Yes	310996	5.1%
No	5757190	94.4%
Don't Know	20316	0.3%
Refused	8412	0.1%
Total	6096914	100.0%

Similar to disabled license plate status, Table 61 indicates that the majority of respondents (96 percent) reported not having disabled transit registration, while 3 percent did report having this type of registration.

Table 61: Disabled Transit Registration (Weighted)

Disabled Transit Registration	Count	Percent
Yes	196138	3.2%
No	5876828	96.4%
Don't Know	15700	0.3%
Refused	8249	0.1%
Total	6096914	100.0%

Just over half of all respondents (56 percent) reported having some level of college education or some type of college degree, while Table 62 confirms that 27 percent (including young children) reported not having attained a high school degree.

Table 62: Level of Education Completed (Weighted)

Level of Education Completed	Count	Percent
Not a high school graduate, 12th grade or less. (Includes very young children)	1745045	27.0%
High school graduate (high school diploma or GED)	1090490	16.9%
Some college credit but no degree	616711	9.5%
Associate or technical school degree	430733	6.7%
Bachelor's or undergraduate degree	1290818	19.9%
Graduate Degree (includes professional degrees, MD, DDs, JD)	1261299	19.5%
Other, specify	2743	0.0%
Don't Know	27493	0.4%
Refused	5288	0.1%
Total	6470619	100.0%

Shown in Table 63, the majority of all respondents (71 percent) reported not being enrolled in school; 29 percent reported being a student of some kind.

Table 63: School Enrollment Status (Weighted)

School Enrollment Status	Count	Percent
Yes	1855592	28.7%
No	4611647	71.3%
Don't Know	2917	0.0%
Refused	463	0.0%
Total	6470619	100.0%

Of those who reported being a student, 81 percent are full-time students, while 19 percent attend school on a part-time basis (Table 64).

Table 64: Full-Time/Part-Time Student Status (Weighted)

Full-time / Part-time Student Status	Count	Percent
Part-time	358296	19.3%
Full-time	1496240	80.6%
Don't Know	986	0.1%
Refused	71	0.0%
Total	1855592	100.0%

Summarized in Table 65 in more detail, of all students, 43 percent attend Kindergarten to Grade 8, 22 percent attend Grade 9 to 12, 11 percent attend a 4-year college or university, 6 percent attend graduate

school, 5 percent attend Nursery School or Preschool, and 3 percent attend Daycare. An additional 2 percent attend Technical/Vocational School.

Table 65: Student Grade Level Attends (Weighted)

Student Grade Level	Count	Percent
Daycare	59095	3.2%
Nursery School, Preschool	100109	5.4%
Kindergarten to Grade 8	804495	43.4%
Grade 9 to 12	408884	22.0%
Technical/Vocational School	33694	1.8%
Two-year college (community college)	121052	6.5%
4-year college or university	201577	10.9%
Graduate School/Professional	117272	6.3%
Other, SPECIFY	2076	0.1%
Don't Know/Refused	7338	0.4%
Total	1855592	100.0%

Table 66 reports on recent transit trips. The majority of respondents made no transit trips in the week prior to their travel day. Six percent reported making two transit trips, while 5 percent reported making ten transit trips.

Table 66: Transit Trips Made in Past Week (Weighted)

Transit Trips Made in Past Week	Count	Percent
0	4678756	72.3%
1	122474	1.9%
2	355034	5.5%
3	77922	1.2%
4	187264	2.9%
5	103867	1.6%
6	119787	1.9%
7	31231	0.5%
8	94527	1.5%
9	6203	0.1%
10	334186	5.2%
11	2817	0.0%
12	60275	0.9%
13	3082	0.0%
14	87860	1.4%
15	18598	0.3%

Transit Trips Made in Past Week	Count	Percent
16	18017	0.3%
17	1493	0.0%
18	5942	0.1%
19	500	0.0%
20	31983	0.5%
21	3259	0.1%
22	1255	0.0%
23	1032	0.0%
24	3016	0.0%
25	5789	0.1%
26	698	0.0%
28	7100	0.1%
30	11343	0.2%
32	403	0.0%
34	152	0.0%
35	422	0.0%
40	2430	0.0%
42	1398	0.0%
45	84	0.0%
48	156	0.0%
50	1152	0.0%
52	124	0.0%
56	170	0.0%
58	213	0.0%
60	523	0.0%
70	282	0.0%
75	162	0.0%
87	81	0.0%
Don't Know	82347	1.3%
Refused	5212	0.1%
Total	6470619	100.0%

For those respondents who work or attend school, Table 67 indicates there was an almost even split between those for whom bicycle facilities are available (43 percent) and for whom bicycle facilities are not available (42 percent) at work or school.

Table 67: Bike Facilities Available at Work/School (Weighted)

Bike Facilities Available at Work/School	Count	Percent
Yes	2019087	42.8%
No	1998235	42.4%
Don't Know	624817	13.3%
Refused	71539	1.5%
Total	4713678	100.0%

Overall, the majority of respondents (68 percent) had not used a bicycle for recreational purposes during the week prior to their travel day. Of those who had biked recreationally, Table 68 shows that 6 percent did so on one day only, 4 percent did so on two days, and 2 percent did so on three days.

Table 68: Days Used Bike for Recreation in Past Week (Weighted)

Days Used Bike for Recreation in Past Week	Count	Percent
0	2928168	68.3%
1	259910	6.1%
2	187141	4.4%
3	95291	2.2%
4	48097	1.1%
5	32611	0.8%
6	9783	0.2%
7	29423	0.7%
Don't Know	427588	10.0%
Refused	271227	6.3%
Total	4289241	100.0%

Similar to recreational biking, the majority of respondents (77 percent) reported not using a bicycle for transportation in the week prior to their travel day. Of those who did, 2 percent used a bicycle for transportation for one day only, while another 2 percent used a bicycle on two days. See Table 69 for more information on bicycle use.

Table 69: Days Used Bike for Transportation in Past Week (Weighted)

Days Used Bike for Transportation in Past Week	Count	Percent
0	3290741	76.7%
1	75857	1.8%
2	67059	1.6%
3	40402	0.9%
4	31082	0.7%
5	37581	0.9%
6	10063	0.2%
7	18763	0.4%
Don't Know	443834	10.3%
Refused	273860	6.4%
Total	4289241	100.0%

As summarized in Table 70, for those who did use a bicycle in the week prior to their travel day, 23 percent used on-road bike lanes, 22 percent used on and off-road bike lanes and trails, while 10 percent used off-road trails.

Table 70: Bike Lanes/Trails Used (Weighted)

Bike Lanes/Trails Used for Non-Recreational Purposes	Count	Percent
Off-Road	443132	10.3%
On-Road	965122	22.5%
Both	945162	22.0%
Don't Know	1511407	35.2%
Refused	424418	9.9%
Total	4289241	100.0%

The majority of respondents (90 percent) reported that they did not use the Internet in place of making a shopping trip on their travel day; only 5 percent of respondents replaced a trip by shopping on the Internet. See Table 71 for more information on internet use in place of travel.

Table 71: Internet was Used on Travel Day in Place of Trips (Weighted)

Internet was used on Travel Day in Place of Trips	Count	Percent
Yes	324959	5.0%
No	5791581	89.5%
Don't Know	335795	5.2%
Refused	18284	0.3%
Total	6470619	100.0%

As Table 72 presents, for those respondents who reported not traveling on their travel day, 30 percent did not travel because they worked around their home (not for pay), 15 percent reported being sick, while 14 percent are homebound, elderly, or disabled. An additional 6 percent worked at home for pay on their travel day.

Table 72: Reason for Non-Travel (Weighted)

Reason for Non-Travel	Count	Percent
Personally Sick	125232	14.9%
Caretaking Sick Kids	10057	1.2%
Caretaking Sick Other	7847	0.9%
Homebound Elderly or Disabled	114131	13.6%
Worked at Home for Pay	47366	5.7%
Worked Around Home (Not for Pay)	251283	30.0%
Out of Area	47736	5.7%
Other	234034	27.9%
Total	837685	100.0%

Vehicle Characteristics

About half of all reported vehicles (49.6 percent) had a vehicle year between 2000 and 2006, as shown in Table 73.

Table 73: Vehicle Year (Weighted)

Vehicle Year	Count	Percent
1964 or older	9631	.2%
1965-1979	29936	.7%
1980-1989	63802	1.6%
1990-1999	735118	18.1%
2000-2003	1046962	25.7%
2004-2006	972548	23.9%
2007	305702	7.5%
2008	276134	6.8%
2009	233884	5.7%
2010	246766	6.1%
2011	57478	1.4%
Refused	92377	2.3%
Total	4070336	100.0%

Regarding the make of respondent vehicles, the most commonly reported vehicle make is Toyota (18 percent), followed by Honda (12 percent), and Ford (11 percent). See Table 74 for more detail on common vehicle makes.

Table 74: Vehicle Make (Weighted)

Vehicle Make	Count	Percent
Acura	55192	1.4%
Audi	40547	1.0%
BMW	67785	1.7%
Buick	79825	2.0%
Cadillac	31564	0.8%
Chevrolet	296379	7.3%
Chrysler	88366	2.2%
Dodge	164591	4.0%
Ford	443006	10.9%
Geo	5616	0.1%
GMC	60582	1.5%
Harley Davidson	33874	0.8%
Honda	499071	12.3%

Vehicle Make	Count	Percent
Hummer	1395	0.0%
Hyundai	109202	2.7%
Infiniti	20373	0.5%
Isuzu	7156	0.2%
Jaguar	5014	0.1%
Jeep	109549	2.7%
Kawasaki	8146	0.2%
Kia	40954	1.0%
Lexus	56970	1.4%
Lincoln	24302	0.6%
Mazda	74969	1.8%
Mercedes	41741	1.0%
Mercury	67129	1.6%
Mitsubishi	23362	0.6%
Nissan	174456	4.3%
Oldsmobile	24029	0.6%
Plymouth	13622	0.3%
Pontiac	54672	1.3%
Porsche	7858	0.2%
Range Rover	2374	0.1%
Saab	39324	1.0%
Saturn	68176	1.7%
Scion	9055	0.2%
Subaru	168576	4.1%
Suzuki	13093	0.3%
Toyota	741929	18.2%
Volkswagen	105728	2.6%
Volvo	104612	2.6%
Yamaha	10728	0.3%
Other	48892	1.2%
Don't Know	19476	0.5%
Refused	7078	0.2%
Total	4070336	100.0%

Displayed in Table 75 regarding vehicle body type, over half of all respondent vehicles (53 percent) were reported as being a car/station wagon, 23 percent were reported as being a SUV, followed by van (any type) and pickup truck (both at 9 percent), and motorcycle (2 percent).

Table 75: Vehicle Body Type (Weighted)

Vehicle Body Type	Count	Percent
Car/Station Wagon	2144300	52.7%
Van (any type)	344912	8.5%
SUV	926701	22.8%
Pickup Truck	352083	8.6%
Other type of truck	7429	0.2%
RV	5196	0.1%
Motorcycle	67313	1.7%
Other, specify	7025	0.2%
Refused	215378	5.3%
Total	4070336	100.0%

Table 76 presents distribution of vehicle fuel type. The vast majority of all respondent vehicles (97 percent) run using traditional gasoline; 2 percent of respondent vehicles are hybrid vehicles, while 1 percent use diesel fuel.

Table 76: Vehicle Fuel Type (Weighted)

Vehicle Fuel Type	Count	Percent
Gas	3935927	96.7%
Diesel	40423	1.0%
Hybrid	76789	1.9%
Flex Fuel	9101	0.2%
Other, specify	1893	0.0%
Don't Know	2846	0.1%
Refused	3357	0.1%
Total	4070336	100.0%

Place Characteristics

Overall, 43 percent of all trips made were to return home for non-work-related activities, shown in Table 77. Other frequently reported reasons for traveling included change mode of transportation (12 percent), work/job (8 percent), and routine shopping (7 percent).

Table 77: Primary Trip Purpose (Weighted)

Primary Trip Purpose	Count	Percent
All other home activities	14160381	42.8%
Changed type of transportation	3958467	12.0%
Work/Job	2498750	7.6%
Routine shopping (groceries, clothing, convenience store, HH maintenance)	2153878	6.5%
Attending Class	1092376	3.3%
Eat meal outside of home	1027752	3.1%
Visit friends/relatives	962137	2.9%
Drop off passenger from car	948537	2.9%
Pick up passenger from car	825329	2.5%
Household errands (bank, dry cleaning, etc.)	818617	2.5%
Indoor recreation/entertainment	813596	2.5%
Work Business Related	759734	2.3%
Personal business (visit government office, attorney, accountant)	694983	2.1%
Health care (doctor, dentist)	587056	1.8%
Outdoor recreation/entertainment	543700	1.6%
Service private vehicle (gas, oil lube, etc.)	296377	0.9%
Working at home (for pay)	262083	0.8%
Civic/Religious activities	203042	0.6%
Shopping for major purchases or specialty items (appliance, electronics, new vehicle, major HH repairs)	161818	0.5%
All other School Activities	111917	0.3%
All other activities at work	83827	0.3%
Loop trip	79280	0.2%
Other, specify	25371	0.1%
Volunteer Work/Activities	5483	0.0%
While Traveling -- Other, Specify	0	0.0%
Total	33074491	100.0%

Summarized in Table 78, the majority of trips (59 percent) were made with only one person in the travel party; 25 percent of trips were made with two people in the travel party, and another 10 percent of trips were made with three people in the travel party.

Table 78: Total People Traveling in Travel Party, Including Respondent (Weighted)

Total People Traveling	Count	Percent
1 person	15230786	59.2%
2 persons	6342061	24.6%
3 persons	2615175	10.2%
4 persons	1022344	4.0%
5 persons	534009	2.1%
Total	25744375	100.0%

Table 79 indicates that at 45 percent of all places visited where the respondent drove a personal vehicle, respondents parked in a parking lot, while a driveway/personal garage was used at 34 percent of all places reported.

Table 79: Parking Location (Weighted)

Parking Location	Count	Percent
Parking Lot	8183180	44.8%
Parking Garage	365947	2.0%
Street	1688269	9.2%
Driveway/personal garage	6175911	33.8%
Did not park	1627338	8.9%
Other, specify	44063	0.2%
Don't Know	143450	0.8%
Refused	24242	0.1%
Total	18252400	100.0%

For the majority of places visited in a personal vehicle (89 percent), Table 80 indicates that respondents were not required to pay for parking.

Table 80: Paid to Park (Weighted)

Paid to Park	Count	Percent
Did not Pay	16249013	89.0%
Did Pay, record amount	287449	1.6%
Don't Know	92194	0.5%
Refused	1623744	8.9%
Total	18252400	100.0%

For those who paid to park, 76 percent paid for parking via cash/credit/debit card, 18 percent paid with a pre-paid parking pass, while 6 percent paid using an employer-provided parking pass. See Table 81 for more detail on how parking fares were paid.

Table 81: How Parking Fare was Paid (Weighted)

How Parking Fare was Paid	Count	Percent
Cash/Credit/Debit Card	218889	76.1%
Pre-Paid parking Pass	50840	17.7%
Employer-Provided Parking Pass	16391	5.7%
Don't Know	74	0.0%
Refused	1254	0.4%
Total	287449	100.0%

As shown in Table 82, for the majority of trips (96 percent), a toll road was not used.

Table 82: Toll Road Used on Trip (Weighted)

Use a Toll Road	Count	Percent
Yes	288635	1.6%
No	17533685	96.1%
Don't Know	405083	2.2%
Refused	24996	0.1%
Total	18252400	100.0%

For those who did use a toll road on their trip, Table 83 summarizes that the majority (87 percent) used the Massachusetts Turnpike; in addition, 6 percent used the Tobin Bridge, 4 percent used the Sumner Tunnel, and 3 percent used the Ted Williams Tunnel.

Table 83: Toll Road Used (Weighted)

Which Toll Road was Used	Count	Percent
Massachusetts Turnpike	250114	86.7%
Ted Williams Tunnel	8760	3.0%
Sumner Tunnel	11310	3.9%
Tobin Bridge	18451	6.4%
Total	288635	100.0%

Travel Behavior

The purpose of this section is to review the travel behavior reported by the 15,033 participating households in order to document the extent to which the travel behavior does vary. This section includes summaries of trip rates by the different household and person characteristics in the total study area. As is shown in Table 84, the overall trip rate by household is 10.2 trips, whereas the overall trip rate per person is 4.1 trips.

Table 84: Average Household and Person Trip Rates (Weighted)

	Average Trip Rate
Household	10.2
Person	4.1

As one may expect, the larger the household, the more trips they report. This trend is summarized in Table 85. The larger households (8 or more members) reported the highest trip rate—29.8. One-person households reported 4.5 trips, two-person households reported 8.3 trips, three-person households reported 13.6 trips, four-person households reported 17.5 trips, five-person households reported 22.2 trips, while six-person households reported 26.6 trips. Finally, seven-person households reported 24.8 trips.

Table 85: Trip Rates by Household Size (Weighted)

Household Size	Trip Rate
1	4.5
2	8.3
3	13.6
4	17.5
5	22.2
6	26.6
7	24.8
8 or more	29.8
Total	10.2

Households with five workers reported the highest trip rate, at 27.2. Similar to the correlation between household size and trip rates, Table 86 reveals that the fewer the household workers, the fewer the trips that households report. In this case, households with no workers made the fewest trips (6.6), households with one worker made 9.7 trips, households with two workers make 13.1 trips, and households with three workers make 16.8 trips, while household with four workers made 22 trips. Conversely, households with the most workers (six) did not make the most trips, rather they made 22.7 trips.

Table 86: Trip Rates by Number of Household Workers (Weighted)

Household Workers	Trip Rate
0	6.6
1	9.7
2	13.1
3	16.8
4	22.0
5	27.2
6	22.7
Total	10.2

Table 87 shows trip rates by household income. Overall, higher-income households reported more trips than lower-income households. For example, households with an annual income of $150,000 or more made the most trips (13.3), followed closely by households within the $100,000–$149,999 range at 13.2 trips. Households in the lowest income category (less than $15,000) reported the fewest trips, 8.3.

Table 87: Trip Rates by Household Income (Weighted)

Household Income	Trip Rate
Less than $15,000	8.3
$15,000-$24,999	9.2
$25,000-$34,999	8.4
$35,000-$49,999	9.4
$50,000-$74,999	10.2
$75,000-$99,999	11.4
$100,000-$149,999	13.2
$150,000 or more	13.3
Don't Know/Refused	9.8
Total	10.2

Of all trips, half were reported as being made by auto/van/truck driver, 19 percent were reported as walk trips, while another 19 percent were reported as being made as an auto/van/truck passenger. Nearly 8 percent of trips were made via transit and 3 percent made by school bus. See Table 88 for more information on travel mode.

Table 88: All Trip Modes (Weighted)

Transportation Mode	Count	Percent
Walk	5044082	19.0%
Bike	292894	1.1%
Auto/Van/Truck Driver	13207297	49.6%
Auto/Van/Truck Passenger	5029508	18.9%
Public Bus	951866	3.6%
Train	1053782	4.0%
Ferry/boat	14539	0.1%
Dial-A-Ride/Paratransit	66570	0.3%
Taxi	107497	0.4%
School bus	752930	2.8%
Motorcycle Driver	14314	0.1%
Motorcycle Passenger	1281	0.0%
Other, SPECIFY	68242	0.3%
Total	26604802	100.0%

Table 89 summarizes mode to work information. For those trips made to work, 68 percent were reported as being made by auto/van/truck driver, 13 percent were reported as being made by bus/public transit, 5 percent were reported as walk trips, while 4 percent were reported as being made as an auto/van/truck passenger. Seven percent of those who work do so from home and therefore require no transportation.

Table 89: Mode to Work (Weighted)

Mode to Work	Count	Percent
Works from home	211178	6.5%
Walk	153289	4.8%
Bike	55937	1.7%
Auto/Van/Truck Driver	2196773	68.1%
Auto/Van/Truck Passenger	122804	3.8%
Bus / Public Transit	405145	12.6%
Dial-A-Ride/Paratransit	4025	0.1%
Taxi	6149	0.2%
Motorcycle Driver	1592	0.0%
Motorcycle Passenger	181	0.0%
Other, SPECIFY	51416	1.6%
Don't Know	10208	0.3%
Refused	5904	0.2%
Total	3224601	100.0%

Table 90 summarizes typical mode to school. For those trips made to school, 30 percent were reported as being made via school bus, 28 percent were reported as being made as an auto/van/truck passenger, 15 percent were reported as being made by auto/van/truck driver, while 12 percent of trips were reported as walk trips.

Table 90: Mode to School (Weighted)

Mode to School	Count	Percent
Home schooled	44231	2.4%
Walk	230441	12.4%
Bike	21235	1.1%
Auto/Van/Truck Driver	271077	14.6%
Auto/Van/Truck Passenger	520597	28.1%
Bus / Public Transit	168672	9.1%
Dial-A-Ride/Paratransit	1887	0.1%
Taxi	749	0.0%
School Bus	550310	29.7%
Motorcycle Driver	216	0.0%
Other, SPECIFY	25972	1.4%
Don't Know	18637	1.0%
Refused	1568	0.1%
Total	1855592	100.0%

Respondents were asked to record the arrival and departure times for all locations visited during their designated 24-hour travel period, as summarized in Table 91. All travel days began at 3:00 a.m. and ended at 2:59 a.m. the following day. As shown in Table 91, travel in the state peaks in the afternoon (p.m. peak), with 32 percent of trips made at this time; 30 percent of trips are made during mid-day, while 26 percent of trips are made during the a.m. peak.

Table 91: Trip Departure Times (Weighted)

Trip Departure Time	Count	Percent
AM Peak (6:00 a.m. to 9:59 a.m.)	6868633	25.8%
Mid-Day (10 a.m. to 2:59 p.m.)	7986897	30.0%
PM Peak (3:00 p.m. to 6:59 p.m.)	8490535	31.9%
Evening (7:00 p.m. to 10:59 p.m.)	2725689	10.2%
Late Night / Early Morning (11 p.m. to 5:59 a.m.)	533048	2.0%
Total	26604802	100.0%

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Massachusetts Travel Survey

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All available report documents can be accessed on the MassDOT web site at:

www.mass.gov/massdot/travelsurvey

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Appendix A: Recruitment Survey

INTRO 1
Universe: CELL-PHONE SAMPLE

#1- Outgoing Call - Hi - My name is _____. I'm calling on behalf of the Massachusetts Department of Transportation. MassDOT is interviewing households across the state about their travel patterns, and it's important that we include people who have only a cell phone. All answers are kept confidential. Is this a good time to talk?

IF THEY SAY NO, IT'S NOT SAFE TO TALK: When can I call you back at this number, or could I call you back at a landline number if that's more convenient for you? (What is the number? When can I call?)

IF THEY SAY THIS IS NOT A CELL PHONE, CONTINUE WITH THE SURVEY BRBR IF THEY MENTION COST OF THEIR CELL MINUTES: We will reimburse you $5 to cover the cost of being on your cell phone for the interview.

IF ASKED, "HOW DID YOU GET THIS NUMBER?" A computer randomly generated a list of possible phone numbers. We do this because we need to talk to a wide representation of people, with both listed and unlisted phone numbers, including cell phones.

IF NEEDED: This call should only take 10-15 minutes for most households. The information we collect is combined with thousands of other households. Your participation in this survey will help MassDOT to make reasonable, cost-effective transportation improvements where they're needed most.

INTRO 2
Universe: UNMATCHED SAMPLE

#2 –Outgoing Call – Hi, my name is _____. Thank you for contacting us about the Massachusetts Travel Survey [IF ASKED: conducted on behalf of the Massachusetts Department of Transportation]. The information collected through this study will benefit your community by helping transportation planners more accurately identify transportation needs. If everyone in your household completes the study, your household will receive $25 to thank you for your time.

INTRO 2
Universe: REGULAR SAMPLE

#3 – Outgoing Call – Hi -I'm calling on behalf of the new Massachusetts Department of Transportation. May I speak with <RFNAM> <RLNAM> or someone age 18 or older?

ADULT ON PHONE: MassDOT is interviewing households across the state about their travel patterns. All information collected is strictly confidential. Your participation in this survey will help us to make reasonable, cost-effective improvements where they're needed most. **IF THEY MENTION COST OF THEIR CELL MINUTES:** We will reimburse you $5 to cover the cost of being on your cell phone for the interview.

NEWPH
Universe: INT01=KN

59 Is there a different number where I can reach you?

Knew Telephone Number: TEL01
Universe: INT01=KN

60 What is that number? FORMAT: 999-999-9999

INT12
Universe: INT01=KN

61 We will call you back on this number shortly. Thank you. WRITE DOWN QUESTIONNAIRE NUMBER AND CALLBACK

Advanced Letter: LETTR
Universe: All

93 Do you remember receiving a letter about this survey?

Yes 1
No.....2
DK.....8
RF.....9

Regular Transit Use: RIBUS
Universe: All

94 Okay, first I need to ask you a few questions to ensure that we are surveying all types of households. Do you or any members of your household use transit at least once a week?

Yes 1
No.....2
DK.....8
RF.....9

Number of Household Vehicles: HHVEH
Universe: All

95 And, how many motor vehicles including motorcycles, mopeds, and RVs are owned, leased, or available for regular use by those who currently live in your household? ENTER NUMBER, RANGE 0-8

NONE.....00
ONE 01
TWO.....02
THREE.....03
FOUR 04
FIVE.....05
SIX 06
SEVEN.....07
EIGHT OR MORE.....08
DK.....98
RF.....99

Number of Household Vehicles – Refused: INT04
Universe: HHVEH=98 or 99

97 Thank you but without this information, your household will not be eligible to participate in this study. REFUSAL TURN-AROUND: THE NUMBER OF TRIPS MADE BY A HOUSEHOLD IS OFTEN DIRECTLY RELATED TO THE NUMBER OF VEHICLES. PAUSE AND GIVE FINAL OPPORTUNITY FOR RESPONDENT TO ANSWER BEFORE TERMINATING

Number of Household Bicycles: HHBIC
Universe: All

98 How many bicycles in working condition are available to members of your household? ENTER NUMBER, RANGE 0-8

NONE.....00
ONE 01
TWO.....02
THREE.....03
FOUR.....04
FIVE.....05
SIX 06
SEVEN.....07
EIGHT OR MORE.....08
DK.....98
RF.....99

Household Size: HHSIZ
Universe: All

99 How many people, including yourself, live in your home? INCLUDE IN THIS NUMBER HOUSEHOLD MEMBERS LIVING HERE AT LEAST 3 NIGHTS PER WEEK, FOSTER CHILDREN, ROOMERS, HOUSEMATES, PEOPLE LIVING HERE WHILE WORKING EVEN IF THEY HAVE ANOTHER PLACE TO LIVE, HOUSEHOLD MEMBERS ON ACTIVE DUTY BUT ONLY IF THEY WILL BE HOME DURING ASSIGNED TRAVEL DAY. DO NOT INCLUDE/B COLLEGE STUDENTS LIVING AWAY WHILE ATTENDING COLLEGE OR PEOPLE WHO LIVE AT ANOTHER PLACE MOST OF THE TIME. ENTER NUMBER, RANGE 1-8

ONE 01
TWO.....02
THREE.....03
FOUR.....04
FIVE.....05
SIX 06
SEVEN.....07
EIGHT OR MORE.....08
DK.....98
RF 99

Household Size – Refused: INT05
Universe: HHSIZ=98 or 99

100 We understand your concerns regarding this question, but without this information, your household will not be eligible to participate in this study since we need to make sure we survey all types of households.

Transportation planners would be interested in seeing if there is a correlation between the size of households and the trips they make. PAUSE AND GIVE FINAL OPPORTUNITY FOR RESPONDENT TO ANSWER BEFORE TERMINATING

INT06
Universe: All

106 We're conducting a study to help area transportation planners understand why, when, and where people travel. We're asking households to record their travel for one day using travel diaries, which we'd mail to you. The day after your assigned travel date, we'll call you to collect your information. First, I'd like ask you a few questions to make sure that all types of households in Massachusetts are represented. We'll then mail to you a diary for each person in your household to record your travel. I want to assure you that the data we collect is for research purposes only and will be held in strict confidence. By participating in this important study, your household will represent hundreds of other households in your area, so we need your help. Will you help your local transportation planners in this study?

AAGE2
Universe: GTYPE=1

And can you tell me, how many people in your household are between 16 and 75 years old?

RANGE 1-8

GPS
Universe: GTYPE=1

107 Your household was also randomly selected to participate in another interesting and important part of this study that involves the use of person-based Global Positioning System, or GPS, technology. In addition to completing your travel diary, we are also asking you and all adult members of your household to carry a GPS device on the same travel day we assign to you as well as the next consecutive weekday. All you will need to do is turn each GPS device on prior to the first trip of your assigned travel day and then carry it or wear it for two consecutive week days. The GPS study allows us to not only collect where people are traveling to, but the actual path taken, which is very useful in transportation planning. If everyone in your household provides valid travel information for the GPS and telephone interview portions of the study, we are offering $25 for each of the <AAGE2> qualified persons that receive the GPS units, in appreciation of your time. IF NEEDED: The GPS units are small and easy to carry (you can clip them onto your belt, backpack, or purse) and they collect details of your travel routes during your travel day. It is very important to the survey that households like yours participate.

Ethnicity or Race: RACE
Universe: All

110 Again, to ensure we include all types of households in this study, what is your race?

White alone 1
Black or African American alone.....2
American Indian and Alaska Native alone.....3
Asian alone.....4
Native Hawaiian and Other Pacific Islander alone 5
Some other race alone 6
Two or more races.....7
RF.....9

Hispanic or Latino: HISP
Universe: All

111 And, are you Hispanic or Latino?

Yes 1
No.....2
RF.....9

Description of Home: RESTY
Universe: All

112 Which best describes your home?

Single family detached dwelling.....1
Building with 2-4 units.....2
Building with 5-19 units.....3
Building with 20 or more units 4
Or something else? (SPECIFY) 7
DK.....8
RF.....9

Home Ownership: OWN
Universe: All

113 Is your home owned or rented?

Owned/Mortgaged.....1
Rented 2
OTHER, SPECIFY 7
DK.....8
RF.....9

Number of Cell Phones: CPLNS
Universe: All

114 Since we are conducting this survey by telephone, I have some questions about the telephones in your household. How many cellular telephone numbers do members of your household have?

ENTER NUMBER

DK.....98
RF.....99

Number of Landline Telephone Numbers: PHLNS
Universe: All

116 How many home telephone numbers does your household have? This includes only land-lines or those hard wired to your house but excludes cellular phones.

ENTER NUMBER
DK.....98
RF.....99

[IF PHLNS = 0, SKIP TO INCA]

Number of hardwired numbers dedicated to Fax: FXLNS
Universe: PHLNS>0

117 How many of these hard-wired telephone numbers, if any, are dedicated to a FAX machine or modem? ENTER NUMBER

ENTER NUMBER
DK.....98
RF.....99

Household Income: INCOM
Universe: All

118 And to ensure that all income levels are represented, I'd like to record your household's 2009 annual income. Again, this is completely confidential. Just stop me when I get to the appropriate income range.

Less than $15,000..... 01
$15,000 to $24,999.....02
$25,000 to $34,999.....03
$35,000 to $49,999.....04
$50,000 to $74,999..... 05
$75,000 to $99,999.....06
$100,000 to $149,999.....07
$150,000 or more 08
REFUSED.....99

INCA
Universe: INCOM=99

118.5 I certainly understand your hesitancy to provide this information. Instead of providing me with your households precise income, would you just tell me if your household's total annual income earned last year, for all workers, before taxes, above or below $35,000? HOUSEHOLD INCOME NOT ONLY ALLOWS US TO VERIFY THAT WE ARE INCLUDING ALL TYPES OF HOUSEHOLDS FROM THE REGION, BUT ALSO HAS BEEN FOUND TO BE RELATED TO THE TYPES OF TRIPS HOUSEHOLDS MAKE.

Above $35,000.....11
Below $35,000 22
REFUSED.....99

INCB
Universe: IINCA=22

119 Is it above or below $15,000? HOUSEHOLD INCOME NOT ONLY ALLOWS US TO VERIFY THAT WE ARE INCLUDING ALL TYPES OF HOUSEHOLDS FROM THE REGION, BUT IT ALSO HAS BEEN FOUND TO BE RELATED TO THE TYPES OF TRIPS HOUSEHOLDS TYPICALLY MAKE.

Above $15,000.....33
Below $15,000 01
DK/RF.....99

INCC
Universe: INCB=33

1120 Is it above or below $25,000?

$25,000 or Above.....03
Below $25,000 02
REFUSED.....99

INCD
Universe: INCA=11

121 Is it above or below $75,000? HOUSEHOLD INCOME NOT ONLY ALLOWS US TO VERIFY THAT WE ARE INCLUDING ALL TYPES OF HOUSEHOLDS FROM THE REGION, BUT IT ALSO HAS BEEN FOUND TO BE RELATED TO THE TYPES OF TRIPS HOUSEHOLDS TYPICALLY MAKE.

$75,000 or Above.....44
Below $75,000 55
REFUSED.....99

INCE
Universe: INCD=55

122 Is it above or below $50,000? HOUSEHOLD INCOME NOT ONLY ALLOWS US TO VERIFY THAT WE ARE INCLUDING ALL TYPES OF HOUSEHOLDS FROM THE REGION, BUT IT ALSO HAS BEEN FOUND TO BE RELATED TO THE TYPES OF TRIPS HOUSEHOLDS TYPICALLY MAKE.

$50,000 or Above.....05
Below $50,000 04
REFUSED.....99

INCF
Universe: INCD=44

123 Is it above or below $150,000? HOUSEHOLD INCOME NOT ONLY ALLOWS US TO VERIFY THAT WE ARE INCLUDING ALL TYPES OF HOUSEHOLDS FROM THE REGION, BUT IT ALSO HAS BEEN FOUND TO BE RELATED TO THE TYPES OF TRIPS HOUSEHOLDS TYPICALLY MAKE.

$150,000 or Above.....08
Below $150,000 66
REFUSED.....99

INCG
Universe: INCF=66

124 Is it above or below $100,000? HOUSEHOLD INCOME NOT ONLY ALLOWS US TO VERIFY THAT WE ARE INCLUDING ALL TYPES OF HOUSEHOLDS FROM THE REGION, BUT IT ALSO HAS BEEN FOUND TO BE RELATED TO THE TYPES OF TRIPS HOUSEHOLDS TYPICALLY MAKE.

$100,000 or Above.....07
Below $100,000 06
REFUSED.....99

HHMEM
Universe: All

129 Thank you. Now I need to ask you a few details about each person in your household to prepare the customized travel diaries. You said there were _____ persons in your household. Let's start with the names or just initials of each person so we can keep track of all the responses. [MAKE SURE YOU HAVE REBUTTAL READY IF RESPONDENT ASKS WHY NAMES ARE NEEDED]

You said there were <HHSIZ> persons in your household. Let's start with the names or just initials of each person so we can keep track of all the responses.

First Name: FNAME
Universe: All

135 IF UNCOMFORTABLE GIVING CHILDREN'S NAMES, OKAY TO DO "CHILD #1, CHILD #2," ETC OR USE INITIALS

Relationship: RELAT
Universe: All

140 What is this person's relationship to you? DO NOT ASK IF RESPONDENT. RESPONDENT IS PERNO1. SELECT REFERENCE PERSON IF RESPONDENT

RESPONDENT.....1
Spouse/Partner.....2
Child.....3
Parent 4
Other Relative 5
Not Related 6

Gender: GEND
Universe: All

141 What is this person's gender? DON'T ASK FOR RESPONDENT

MALE 1
FEMALE.....2
RF.....9

Exact Age: AGE
Universe: All

145 What is <PRN15> age?

RANGE: 0 - 97 IF LESS THAN 1, ENTER 0

98 years or older.....98
DK/RF.....99

Age Category: AGEB
Universe: AGE=99

146 Many of our questions about <PRN14> are based on <PRN15> age. Can you tell me if <PRN11> are/is...

Younger than 16 1
16 or older 2
DK/RF 9

GCONF
Universe: AGE=99 and GTYPE=1

147 In order for your household to qualify for the GPS portion of the study, we really need to know whether <YOU> is under or over the age of 16. PAUSE AND GIVE OPPORTUNITY FOR RESPONDENT TO GIVE AGE

AGE16
Universe: All

149 IS THIS PERSON AT LEAST 16?

YES 1
NO 2

Driver's License: LIC
Universe: AGE>15 or AGEB>1

166 Do(es) <YOU> have a valid driver's license?

YES 1
NO 2
DK 8
RF 9

Transit Pass: TRANS
Universe: AGE>15 or AGEB>1

167 Do(es) <YOU> have a transit pass?

YES 1
NO 2
DK 8
RF 9

Type of Transit Pass: PASST
Universe: TRANS=1

168 What type of transit pass do(es) <PRN11> have? SELECT ALL THAT APPLY

Local bus pass 01
LinkPass (subway + local bus) 02
Inner express bus pass 03
Outer express bus pass 04
Commuter rail pass 05
Ferry/Boat pass 06
Charlie Card 07
Other (Specify) 97
DK 98
RF 99

Employed: EMPLY
Universe: AGE>15 or AGEB>1

169 Are/Is <YOU> employed at a paying job, either full-time or part-time? THIS DOES NOT INCLUDE VOLUNTEER POSITIONS.

YES 1
NO 2
DK 8
RF 9

Unemployed Status: PRIMA
Universe: EMPLY>1

171 Which of the following best describes <PRN15> status?

Retired 01
Disabled/On Disability Status 02
Homemaker 03
Unemployed but looking for work 04
Unemployed and not looking for work 05
A Student? 06
OTHER (SPECIFY) 97
DK 98
RF 99

Hours worked per day: HOURS
Universe: EMPLY=1

172 How many hours per day/ do(es) <YOU> work on average? (MAIN JOB). IN THIS QUESTION, WE ARE ONLY INTERESTED IN HOURS WORKED AT THIS MAIN JOB.

RANGE: 1-24

DK 98
RF 99

Number of Jobs: JOBS
Universe: EMPLY=1

173 How many jobs do(es) <YOU> have? Please include all paid positions that <YOU> work(s) on a regular basis.

RANGE 1-10

PRN22
Universe: EMPLY=1 and JOBS>1

174 For this next series of questions, please consider only <PRN15> primary job.

Work Name: WNAME
Universe: EMPLY=1

175 We're interested in employment locations because travel to work activities often affect other daily activities and travel. What is the name of <YOUR> work? (MAIN JOB) RECORD RESPONSE

SELF-EMPLOYED (SPECIFY BUSINESS / COMPANY NAME) 1
OTHER (SPECIFY BUSINESS / COMPANY/).....7
DK/RF.....9

Work Address: WADDR
Universe: EMPLY=1

176 What is the address of <YOUR> work (MAIN JOB)? RECORD STREET ADDRESS. HABITUALS ARE REQUIRED FOR DATA DELIVERY

Work Address – City: WCITY
Universe: EMPLY=1

178 [ENTER CITY]

Work Address – State: WSTAT
Universe: EMPLY=1

179 [ENTER STATE]

Work Address – Zip Code: WZIP
Universe: EMPLY=1

180 Thank you sir/ma'am, and what would the zip code of your work location be?

DK/RF.....99999

Work Address – Cross-Streets: WXSTR
Universe: EMPLY=1 and WADDR is Null

181 What are the nearest cross streets to <YOUR> work? COLLECT CROSS STREETS IN THIS FORMAT STREET AT STREET

Days per Week at Work: WDAYS
Universe: EMPLY=1

182 How many days per week do <YOU> work on average?

RANGE: 1-7
DK.....8
RF.....9

Work Mode: WMODE
Universe: EMPLY=1

183 How do(es) <PRN11> normally get to work?

WORKS AT HOME.....00
Walk.....01
Bike.....02
Auto / van/ truck driver.....03
Auto / van / truck passenger.....04
Public transit.....05
Dial-a-ride / Paratransit.....06
Taxi.....07
Motorcycle Driver.....08
Motorcycle Passenger.....09
OTHER, SPECIFY.....97
DK.....98
RF.....99

Transit Service used to travel to Work: WTRSB
Universe: WMODE=5

184 Which transit service do(es) <YOU> normally use to get to work? If <PRN11> use(s) multiple services, please tell me which service is used for the longest part of the trip to work. RECORD RESPONSE

Telecommute: TELEW
Universe: EMPLY=1

185 Does <YOUR> employer allow <PRN14> to work from home for pay on a regular basis? This would be in place of traveling to a regular work location, something that is commonly referred to as "telecommuting."

YES.....1
NO.....2
DK.....8
RF.....9

Flexible Work Schedule: SCHED
Universe: EMPLY=1

186 Does <YOUR> employer offer any flexible work hours program for which <PRN11> are/is eligible to participate in?

YES 1
NO 2
DK 8
RF 9

Flexible Work Programs Offered: FLEXP
Universe: SCHED=1

187 What type of program(s) does <PRN15> employer offer? SELECT ALL THAT APPLY, UP TO 4

9/80 work period 1
Early arrival/Early departure 2
4/40 work week 3
OTHER (SPECIFY) 7
DK 8
RF 9

Participation in Work Program: FLEXT
Universe: EMPLY=1

189 Do(es) <PRN11> participate in <PRN26>?

Yes 1
No 2
DK 8
RF 9

Disabled License Plates: EDISA
Universe: AGE>5

190 Do(es) <PRN11> have a special needs placard or license plate for your vehicle?

YES 1
NO 2
DK 8
RF 9

Disabled Transit Registration: EDIS2
Universe: AGE>5

191 Are/Is <PRN11> a registered user of special transit services for the elderly or disabled (e.g., dial-a-ride)?

YES 1
NO 2
DK 8
RF 9

Education Level: EDUCA
Universe: All

191 What is the highest degree or level of school <PRN11> have/has completed?

Not a high school graduate, 12 grade or less (THIS INCLUDES VERY YOUNG CHILDREN TOO).....1
High school graduate (high school diploma or GED).....2
Some college credit but no degree 3
Associate or technical school degree 4
Bachelor's or undergraduate degree 5
Graduate degree (includes professional degree like MD, DDs, JD) 6
OTHER, SPECIFY 7
DK.....8
RF.....9

Student: ENROL
Universe: EMPLY=1

195 Are/Is <PRN11> a student?

YES.....1
NO.....2
DK.....8
RF.....9

Full-Time/Part-Time Student: FPTIM
Universe: ENROL=1

196 Are/Is <PRN11> a part-time or full-time student? .

Part-Time 1
Full-Time 2
DK.....8
RF.....9

School Grade Level Attending: SCHOL
Universe: ENROL=1

197 What school grade or level do(es) <PRN11> attend?

Daycare 01
Nursery school, pre-school.....02
Kindergarten to grade 8.....03
Grade 9 to 12.....04
Technical/Vocational school.....05
2-year college (community college).....06
4-year college or university.....07
Graduate school/professional.....08
OTHER, SPECIFY 97
DK.....98
RF.....99

School Name: SNAME
Universe: ENROL=1

198 What is the name of that school?

School Address: SADDR
Universe: ENROL=1

199 What is the address of that school? RECORD STREET ADDRESS. HABITUALS ARE REQUIRED FOR DATA DELIVERY

School Address – City: SCITY
Universe: ENROL=1
201 [ENTER CITY]

School Address – State: SSTAT
Universe: ENROL=1
202 [ENTER STATE]

School Address – Zip Code: SZIP
Universe: ENROL=1

203 What is the zip code of this school location?

DK/RF.....99999

School Address – Cross-Street: SXSTR
Universe: ENROL=1 and SADDR is Null

204 What are the nearest cross streets to <YOUR> school? COLLECT CROSS STREETS IN THIS FORMAT STREET AT STREET

School Mode: SMODE
Universe: ENROL=1

205 How do(es) <PRN11> normally get to school?

HOMESCHOOLED.....00
Walk.....01
Bike.....02
Auto / van/ truck driver.....03
Auto / van / truck passenger.....04
Public transit.....05
Dial-a-ride/Para transit.....06
Taxi.....07
School Bus.....08
Motorcycle driver.....09
Motorcycle passenger.....10
OTHER (specify).....97
DK.....98
RF.....99

Transit Service used to travel to School: STRSB
Universe: SMODE=5

206 Which transit service do(es) <PRN11> normally use to get to school? If <PRN11> use(s) multiple services, please tell me which service is used for the longest part of the trip to school. RECORD RESPONSE

Number of Transit trips in past week: TTRIP
Universe: All

209 How many one-way trips (any) using Transit did <PRN11> make in the past 7 days? A round trip counts as two one-way trips. RECORD RESPONSE, RANGE 0 - 97

DK.....98
RF.....99

Bike Facilities at Work/School: BIKFA
Universe: EMPLY=1 or ENROL=1

210 Do(es) <PRN11> have a secure bike facility at school or work?

Yes.....1
No.....2
DK.....8
RF.....9

Bike used for recreation last week: BIKD1
Universe: HHBIC>0

211 How many days last week did <PRN11> bike for recreation? RECORD RESPONSE, RANGE 0-7

DK.....8
RF.....9

Bike used for transportation last week: BIKD2
Universe: HHBIC>0

212 How many days last week did <PRN11> use a bike for transportation, such as for work, school, errands,

etc.?

RANGE 0-7

DK.....8
RF.....9

Bike Trails/Lanes Used: BIKRD
Universe: HHBIC>0

213 Do(es) <PRN11> usually use off-road bike trails, on-road bike routes or lanes, or both while traveling by bicycle?

Off-road.....1
On-road 2
Both.....3
DK.....8
RF.....9

Demographic/GPS Incentives: PRN10
Demographic Incentives
Universe: FLSIZ=1 or FLINC=1 or FLAGE=1 or FLVEH=1

1 We understand how valuable your time is and are offering your household $25 in appreciation of your efforts if everyone in your household completes the study and provides valid travel information.

GPS Incentives
Universe: GTYPE=1

2 We understand how valuable your time is and are offering your household [CALCULATED: $(25x<C1675>)→<INAMT>] if everyone in the household provides valid travel information.

VEHI1
Universe: HHVEH>0

244 Earlier you mentioned that you have <HHVEH> vehicle total in your household. Now I need to collect some information about this vehicle.

Year of Vehicle: YEAR
Universe: HHVEH>0

250 What is the year of this vehicle? RANGE: 1900 - 2011

DK.....9998
RF.....9999

Make of Vehicle: MAKEX
Universe: HHVEH>0

251 What is the make of this vehicle?

ACURA..... 11
AUDI..... 12
BMW..... 13
BUICK.....14
CADILLAC 15
CHEVROLET.....16
CHRYSLER..... 17
DAEWOO 18
DODGE..... 19

FORD 20
GEO 21
GMC 22
HARLEY DAVIDSON 23
HONDA 24
HUMMER 25
HYUNDAI 26
INFINITI 27
ISUZU 28
JAGUAR 29
JEEP 30
KAWASAKI 31
KIA 32
LEXUS 33
LINCOLN 34
MAZDA 35
MERCEDES 36
MERCURY 37
MITSUBISHI 38
NISSAN 39
OLDSMOBILE 40
PLYMOUTH 41
PONTIAC 42
PORSCHE 43
RANGE ROVER 44
SAAB 45
SATURN 46
SCION 47
SUBARU 48
SUZUKI 49
TOYOTA 50
VOLKSWAGEN 51
VOLVO 52
YAMAHA 53
OTHER, SPECIFY 97
DK 98
RF 99

Model of Vehicle: MODLX
Universe: HHVEH>0

252 What is the model of this vehicle? IF YOU DON'T FIND IT IN THE TABLE, SELECT 997.

OTHER, COLLECT IN NEXT QUESTION.....997
DK.....998
RF.....999

Body Type of Vehicle: BODY
Universe: HHVEH>0

256 And is this a/an?

Car, sedan, or station wagon? 01
Van (ANY TYPE).....02
SUV.....03
Pick-up Truck.....04
Other kind of truck.....05
RV 06
Motorcycle 07
Or something else? SPECIFY 97
RF.....99

Fuel Type of Vehicle: FUEL
Universe: HHVEH>0

257 What type of fuel does it use?

Gas 1
Diesel 2
Hybrid 3
Flex Fuel 4
OTHER (SPECIFY).....7
DK.....8
RF.....9

Main User of Vehicle: USER
Universe: HHVEH>0

258 Who in the household is the main driver of this vehicle? RECORD RESPONSE

DK.....98
RF.....99

Travel Day Assignment: ASSN
Universe: All

272 As I mentioned previously, understanding your household's travel and activities is very important for improving transportation in your area and throughout Massachusetts. We will send you a diary for each member of your household to keep track of your travel and activities for 24 hours on READ DAY AND DATE. NO: Well, lets try a different time. How about READ ALT DAY AND DATE.

Travel Day Assignment, Refused: INT13
Universe: ASSN=999

277 These are all the questions we have for you today, thank you for your time.

Respondent First Name: RESPF
Universe: All

279 To whom should we address the envelope? INDICATE THAT INFORMATION IS NECESSARY, IF STILL REFUSE, TERMINATE

FIRST NAME

Respondent Last Name: RESPL
Universe: All
280 LAST NAME

PRON3
Universe: GTYPE=1 or 2

283 The travel diaries and the GPS devices will be shipped to you within the next week. After your travel date, promptly return the GPS devices by FedEx using the prepaid return envelope provided with the equipment. Is your home address the best place for us to have these items delivered to you? NOTE: P.O. BOXES ARE NOT VALID SHIPPING ADDRESSES FOR FEDEX. In order to mail the diaries to you, I need your physical address.

Mailing Address Type: MTYPE
Universe: All

285 Is this a home address, work address, or other address?

HOME.....1
WORK.....2
OTHER.....7

Company Name: MNAME
Universe: MTYPE=2

286 What is the company's name?

Mailing Address: MADDR
Universe: All

287 What is your street address? REQUIRED. NO PO BOXES ALLOWED.

Mailing Address – Suite: MSUIT
Universe: All

288 Do you have an apartment number or suite number? YES: What is it? NOTE: IF NONE, LEAVE IT BLANK. DO NOT TYPE "NONE"

Mailing Address – City: MCITY
Universe: All

289 What city is that in?

Mailing Address – Zip: MZIP
Universe: All

291 What is your zip code?

RANGE: 01001 - 02791 (VALID ZIP CODES IN MASSACHUSETTS) 99999 IS NOT VALID.

GEXPL
Universe: GTYPE=1

300 We will mail the diaries and GPS units to you in a few days. The package will include a pre-paid envelope to use when returning the equipment.

Physical Home Address: HADDR
Universe: All

303 What is your physical address? REQUIRED

Physical Home Address – Apt/Suite #: HSUIT
Universe: All

304 Do you have an apartment number or suite number? YES: What is it? CAN BE BLANK

Physical Home Address – City: HCITY
Universe: All

305 What city is that in?

Physical Home Address – Zip Code: HZIP
Universe: All

306 What is the zip code? RANGE: 01001 - 02791 (VALID ZIP CODES IN MASSACHUSETTS) 99999 IS NOT VALID

Confirm Physical Home Address: CMADD
Universe: All

310 You said that your home address is...

ADDR: <HADDR> APT/STE: <HSUIT> CITY: <HCITY> STATE: <HSTAT> ZIP CODE: <HZIP>

Is this correct? IF NO OR IS ANYTHING IS BLANK, YOU WILL GO BACK TO TRY AGAIN.

REMIN
Universe: All

315 We will mail these to you in a few days and will call you again on <RMDAT> to make sure you have received them and to answer any questions. When we will call to ask about your travel on <BGDAT>, when would be the best time to reach you?

Morning.....1
Afternoon 2
Evening 3

HVDPH
Universe: All

316 And should we call you at this telephone number or is there a different phone number where you would prefer to be called? THE # WE HAVE IS: $N

CALL ME AT THIS NUMBER.....1
CALL ME AT DAYTIME/DIFFERENT NUMBER.....2

ALTPH
Universe: HVDPH=2

317 And what is the number?

FORMAT: 999-999-9999

CBACK
Universe: All

318 When we call back to collect your travel and activities, we will not ask to speak to anyone under 16 years old, but we would like to ask about their travel. Who would be the best person to give that information? ENTER PERSON NUMBER

Thank You: THANK
Universe: Demographic Incen or Unmatched Sample:

1 "Again, I wish to thank you for agreeing to participate in the study. If everyone in your household provides valid travel information by [TRAVEL DAY + 15 days], your household will receive $<INAMT> to thank you for your efforts. Please tell the other members of your household how important their participation is for the success of the study. We look forward to talking with you again. If you have any questions or comments, you can reach us at 888-222-7734. Thank you and have a good day/night.

Universe: GTYPE=1

2 We understand how valuable your time is and want to thank you for agreeing to participate in the GPS portion of the study. We are offering your household <INAMT> if everyone in your household provides valid travel information by [TRAVEL DAY + 15 days]. Please tell the other members of your household how important their participation is for the success of the study. We look forward to talking with you again. If you have any questions or comments, you can reach us at 888-222-7734. Thank you and have a good day/night.

#3-No incentive

Thank you for participating in the Massachusetts Travel Survey. Please tell the other members of your

household how important their participation is for the success of the study. We look forward to talking with you again. If you have any questions or comments, you can reach us at 888-222-7734. Thank you and have a good day/night.

Universe: Matched

5 We understand how valuable your time is and want to thank you for your participation.

EXPLANATION TEXT AS NEEDED:

F6
Universe: All

348 We're asking households to record their travel for a 24 hour period. The travel details help us understand the times of day people are traveling and where they are traveling to. IF NEEDED: We will send you diaries to record your trip information. This information is for research purposes only and will be held in strict confidence.

F7
Universe: All

349 The purpose of this study is to help identify ways of improving local transportation. All the information that you provide will be held in strict confidence and will be used only to benefit your community. Would you help your community by participating in this important study?

Appendix B: Retrieval Survey

Introduction: INT02
Universe: All

93 Hi - this is _____ and I'm calling about the Massachusetts Travel Survey. We recently spoke with <RESPF> <RESPL> and are calling back now to complete the interview. NO: Can I speak with her/him now? NEW RESPONDENT, REPEAT INTRO. <PRON6> on a <GDAY> at <TMCMP> ASSN:<ASSN>

CONTINUE ..... OK
RECONSTRUCTION OF TRAVEL DAY..... RD
ENTERING A MAIL-IN ..... CE
RESPONDENT WILL MAIL IN LOGS ..... ML
RESPONDENT HAS MAILED IN LOGS..... HM
LOGS RECEIVED..... LR
----- .....
NO ANSWER ..... NA
BUSY ..... BZ
ANSWERING MACHINE ..... AM
LEFT MESSAGE..... LM
----- .....
DISCONNECT..... ID
COMPUTER/FAX MACHINE ..... IM
BUSINESS/GOVERNMENT..... IG
CALLER ID ..... PM
WRONG NUMBER, NEED TO RESEARCH ..... IW
----- .....
SPECIFIC CALLBACK ..... KB
GENERAL CALLBACK..... KH
CALL BACK IN 5 MINUTES K5
NEW NUMBER (HAVE NEW NUMBER)..... KN
----- .....
SPANISH CALLBACK, HOUSEHOLD ..... SH
SPANISH CALLBACK, RESPONDENT..... SB
SPANISH ANSWERING MACHINE..... SA
SPANISH BUSY..... SZ
SPANISH NO ANSWER..... SN
----- .....
RESCHEDULE, CALLBACK ..... RT
RESCHEDULE, NEED TO RE-MAIL, CALLBACK ..... RM
----- .....
1ST REFUSAL R1
2ND REFUSAL R2
3RD REFUSAL..... R3
4TH REFUSAL..... R4
5TH AND FINAL REFUSAL R5
----- .....
HUNG UP (W/O A WORD)..... RH
2ND HANG UP H2
3RD HANG UP..... H3
4TH HANG UP..... H4
5TH AND FINAL HANG UP..... H5
----- .....

INTERNET RETRIEVAL ..... CW

Reached on Cell phone: CELLP
Universe: All

109 Have I reached you on a cell phone? IF THEY MENTION COST OF THEIR CELL MINUTES: We will reimburse you $5 to cover the cost of being on your cell phone for the interview.

YES 1
NO 2

New Phone Number: NEWPH
Universe: CELLP=1

110 Is there a different number where I can reach you?

YES 1
NO 2

Telephone Number: TEL02
Universe: NEWPH=1

111 What is that number? FORMAT: 999-999-9999

INT05
Universe: NEWPH=1

112 We will call you back on this number shortly. Thank you. WRITE DOWN QUESTIONNAIRE NUMBER AND CALLBACK

Cell Phone Flag: CFLAG
Universe: CELLP=1

114 DID THE RESPONDENT ASK FOR THEIR CELL-PHONE MINUTES TO BE REIMBURSED?

YES 1
NO 2

SCPT1
Universe: All

115 Last week, we spoke with you about the travel survey and sent you a diary <PRON3> to record your travel on <ASSN>. I'd like to collect your information now. First, I need to verify demographic information (particularly household size, household member characteristics, and household vehicle info). <LKPER> <LKVEH>

GPS Incentive Text: MITEX
Universe: GTYPE=1

116 Once we collect all of the necessary information for each person in your household, we will send you a check for <GAMNT> in appreciation of your participation.

Demographic Incentive Text: INTEX
Universe: GTYPE<>1 and INCEN=1

117 Once we collect all of the necessary information for each person in your household, we will send you a check for <INAMNT> in appreciation of your participation.

Income: INCOM
Universe: INCOM=99

334 I realize you refused this question during recruitment and I understand if you feel uncomfortable answering this question. However, we only ask about income to ensure all households are equally represented in our survey. Also it has been found to be related to the types of trips households make.

Less than $15,000.....01
$15,000 to $24,999.....02
$25,000 to $34,999.....03
$35,000 to $49,999.....04
$50,000 to $74,999.....05
$75,000 to $99,999.....06
$100,000 to $149,999.....07
$150,000 or more 08
REFUSED.....99

INT03
Universe: All

350 Okay, now I'd like to collect the trip information your household recorded for <ASSN >. ALL: We'll begin with your information.

Typical Day: TYPDY
Universe: All

371 In general, would you say that <ASSN> was a typical day for you?

YES 1
NO: Why not? 2
NOT ASKED-MAIL IN 3

Trips Planned: TYPPL
Universe: All

372 Were most of <YOUR> travel and activities for this period planned in advance or did you change your plans as the day progressed?

PLANNED.....1
CHANGED, SAY: What happened that caused the change in plans?.....2
DK.....8

Completed Logs: CMPLG
Universe: All

373 I'd like to talk about the travel and activities <YOU> recorded in the diary we sent. Did <YOU> complete the travel log?

YES (COMPLETED).....1
NO (NOT COMPLETED).....2
DID NOT RECEIVE MATERIALS.....3
DK.....8
RF.....9

Have Travel Log: HVLOG
Universe: CMPLG=1

374 Do you have <YOUR> completed diary with you now? IF NEEDED: I can wait while you get it.

YES.....1
NO.....2
REFUSED.....9

No Travel Log: NOLOG
Universe: CMPLG<>1 or HVLOG<>1

375 Let's continue with the interview anyway. Please try to recall the information as best as you can.

CONTINUE.....1

Number of Places Visited on Travel Day: TOTPL
Universe: All

377 How many total places did <YOU> visit over the course of the travel day?

TTBUT
Universe: All

378 FIRST TIME YOU READ THIS: I will now use an interactive mapping tool to map your home/work/school locations. BWHEN YOU COLLECT THE TRIP INFO FOR PERSON ONE:/B Thank you for providing me information about your home/work/school locations. Using the same mapping tool we used to collect your habitual addresses, I'll now collect the addresses for the places you visited on your travel day. We'll work together through each place using whatever information you have available, such as location names, addresses, cross-streets or landmarks. Let's start with where you were at 3AM- home or someplace else? WHEN YOU COLLECT THE TRIP INFO FOR ALL OTHER PERSONS: Using the same mapping tool I'll now collect the addresses for the places this person visited on their travel day.

Place Type: PTYPE
Universe: All

391 IF PLACE 1: Okay, where were/was <YOU> at 3 am on <ASSN>. OTHERWISE: Where did <YOU> go next?

My Home 1
My Work 2
My School 3
Transit Stop 4
new place - in area.....5
new place - out of area (obtain city and state).....6

Travel Mode: MODE
Universe: All

392 How did <YOU> get there?

WALK.....01
BIKE 02
AUTO/VAN/TRUCK DRIVER 03
AUTO/VAN/TRUCK PASSENGER 04
PUBLIC TRANSIT BUS 05
PUBLIC TRANSIT RAIL/TRAIN 06
FERRY/BOAT.....07
DIAL-A-RIDE/PARATRANST 08
TAXI 09
SCHOOL BUS 10
MOTORCYCLE DRIVER 11
MOTORCYCLE PASSENGER 12
Other (Specify).....97

Arrival Time: ARRTM
Universe: All

393 What time did <YOU> arrive? IF NEEDED: You can just tell me approximately when <YOU> arrived? ENTER IN MILITARY TIME, HHMM 0000-MIDNIGHT, 1200-NOON, 2359-11:59PM, 0030-12:30AM

Number of People on Trip: PARTY
Universe: MODE<>9 and 10

394 How many others traveled with <YOU>? DO NOT INCLUDE RESPONDENT

NONE.....0
ONE 1
TWO.....2
THREE.....3
FOUR.....4
FIVE.....5
SIX 6
SEVEN.....7
EIGHT OR MORE.....8

Number of Household Members on Trip: HHMEM
Universe: PARTY>0

395 Of these, how many were household members? ENTER NUMBER, RANGE 0-9 DO NOT INCLUDE RESPONDENT

Which Household Members Traveling: PERTP
Universe: HHMEM>0

396 Which household members were with <YOU> on this trip? ENTER PERNO USE SUMMARY FOR PERSON #'S

NONE.....00
01.....01
02.....02
03.....03
04.....04
05.....05
06.....06
07.....07
08.....08
MORE THAN 8 PERSONS, SPECIFY THOSE NOT ENTERED ABOVE IN THIS FORMAT: ## ## ## ##.....10
DK/RF.....99

Transit Mode Type: MODE2
Universe: MODE=5 or 6

404 What type of transit service did <YOU> use?

Local Bus.....1
Express Bus.....2
Shuttle Bus.....3
Subway.....4
Commuter Rail.....5

How Fare was paid: FARE
Universe: MODE=5, 6, or 7

405 How did <YOU> pay <YOUR> fare?

Cash.....01
Weekly pass.....02
Monthly pass.....03
Charlie Card.....04
Student ID.....05
Transfer.....06
Charlie Ticket.....07
OTHER (SPECIFY).....97
DK.....98
RF.....99

Transit Route used: ROUTE

405 ROUTE – Asked next (open-ended)

Vehicle Number: VHTNO
Universe: MODE=3, 4, 11, or 12

406 Which vehicle did <YOU> use? ENTER HH VEH NUMBER OR 97 FOR NON-HH VEHICLE. USE VEHICLE SUMMARY FOR VEHICLE NUMBERS

ONE 01
TWO.....02
THREE.....03
FOUR.....04
FIVE.....05
SIX 06
SEVEN.....07
EIGHT.....08
NON-HOUSEHOLD VEHICLE 97
DK.....98
RF.....99

Reason Vehicle not Used on Travel Day: REAVH
Universe: VEHNO not used on TDAY

407 What was the reason a household vehicle was not used?

Parking Location Type: PRKTY
Universe: MODE=3, 4, 11, or 12

408 Where did <YOU> park?

Parking Lot.....1
Parking Garage.....2
Street 3
Driveway/Personal Garage.....4
Did not park 5
Driveway.....6
OTHER (SPECIFY).....7
DK.....8
RF.....9

Location where Person parked: PLOC
Universe: MODE=3, 4, 11, or 12

409 Did you park at this location or off site?

At this destination 1
Off site.....2
DK/RF.....9

Cross-Street of Parking Location: PRKLC
Universe: MODE=3, 4, 11, or 12 and PLOC>1

410 Where is the parking lot, parking garage, or on-street parking located? RECORD CROSS STREETS

Pay to Park: PAYPK
Universe: MODE=3, 4, 11, or 12

411 How much did <YOU> pay to park?

Did not pay 1
RECORD RESPONSE 2
DK 8
RF 9

Unit of Cost: PRKUN
Universe: MODE=3, 4, 11, or 12 and PAYPK=2

412 Was the cost per...

Hour 1
Day 2
Week 3
Month 4
Year 5
DK 8
RF 9

How Parking was Paid: PRKHW
Universe: PAYPK=2

413 How did <YOU> pay for parking?

Cash/Credit/Debit Card 1
Pre-paid parking pass 2
Employer-provided parking pass 3
DK 4
RF 5

How much paid out of pocket: EPARK
Universe: PAYPK=2

414 How much did <YOU> pay "out-of-pocket" to park that was not reimbursed by <YOUR> employer? RECORD RESPONSE

RANGE: 1-5000

Toll Road Used: TOLLF
Universe: MODE=3, 4, 11, or 12

415 Did <YOU> use a toll road on <YOUR> trip?

YES 1
NO 2
DK 8
RF 9

Which Toll Road Used: TOLLT
Universe: TOLL=1

416 Which toll road did <YOU> use?

Turnpike 1
Ted Williams Tunnel 2
Sumner Tunnel 3
Tobin Bridge 4

Where Toll Road was entered: TOLLE
Universe: TOLLF=1

416a Where did you enter (the) [TOLL ROAD MENTIONED IN TOLLT]?

West Stockbridge (Plaza 1) 1
Lee (Plaza 2) 2
Westfield (Plaza 3) 3
West Springfield / I-91 (Plaza 4) 4
Chicopee (Plaza 5) 5
Springfield / I-291 (Plaza 6) 6
Ludlow (Plaza 7) 7
Palmer (Plaza 8) 8
Sturbridge / I-84 (Plaza 9) 9
Worcester/Auburn/I-290 (Plaza 10) 10
Worcester / Millbury (Plaza 11) 11
Framingham (Plaza 12) 12
Natick / Rt. 30 (Plaza 13) 13
Weston / Rt. 128 / I-95 (Plaza 14) 14
Newton / Boston / Weston (Plaza15) 15
West Newton (Plaza 16) 16
Newton Corner (Plaza 17) 17
Allston / Brighton (Plaza 18) 18
Allston / Brighton (Plaza 19) 19
Allston / Brighton (Plaza 20) 20
Allston / Brighton (No plaza specified) 21
Dartmouth Street (Plaza 22) 22
South Station/I-93 N/S (Plaza 24) 24
South Boston (Plaza 25) 25
Westborough / I-495 (Plaza 26) 26
Worcester / Rt. 146 (Plaza 25) 27
Logan Airport (Summer Tunnel) 30
Logan Airport (TWT Airport) 31
Logan Airport (TWT Rte 1A) 37
Logan Airport (Not specified) 39
Massachusetts Avenue 91
Clarendon Street 92
Arlington Street 93
Don't Know 98
Refused 99

Where Toll Road was Exited: TOLLX
Universe: TOLLF=1

416b Where did you exit (the) [TOLL ROAD MENTIONED IN TOLLT]?

West Stockbridge (Plaza 1) 1
Lee (Plaza 2) 2
Westfield (Plaza 3) 3
West Springfield / I-91 (Plaza 4) 4
Chicopee (Plaza 5) 5
Springfield / I-291 (Plaza 6) 6
Ludlow (Plaza 7) 7
Palmer (Plaza 8) 8
Sturbridge / I-84 (Plaza 9) 9
Worcester/Auburn/I-290 (Plaza 10) 10
Worcester / Millbury (Plaza 11) 11
Framingham (Plaza 12) 12
Natick / Rt. 30 (Plaza 13) 13
Weston / Rt. 128 / I-95 (Plaza 14) 14
Newton / Boston / Weston (Plaza15) 15
West Newton (Plaza 16) 16
Newton Corner (Plaza 17) 17
Allston / Brighton (Plaza 18) 18
Allston / Brighton (Plaza 19) 19
Allston / Brighton (Plaza 20) 20
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Logan Airport (Summer Tunnel) 30
Logan Airport (TWT Airport) 31
Logan Airport (TWT Rte 1A) 37
Logan Airport (Not specified) 39
Massachusetts Avenue 91
Clarendon Street 92
Arlington Street 93
Don't Know 98

Refused..... 99

Toll Road Amount: TOLLC
Universe: TOLLF=1

417 How much did <YOU> pay for the toll? RECORD RESPONSE

RANGE 1-50

Reason for Using or Not Using HOV Lane: HOV
Universe: MODE=3 and TOTTR>2

418 IF an HOV lane was available, why did <YOU> choose not to use it?

SPECIFY.....1

Main Trip Purpose: TPUR1
Universe: All

419 What did you do there?

AT MY HOME
Working at home (for pay).....01
All other at home activities 02
AT MY WORK LOCATION
Work/Job.....03
All other activities at Work 04
AT MY PRIMARY VOLUNTEER LOCATION
Volunteer work/activities.....05
AT MY SCHOOL
Attending Class 06
All other activities at school.....07
WHILE TRAVELING
Change type of transportation/transfer.....08
Dropped off passenger/driver from car 09
Picked up passenger from car.....10
OTHER - SPECIFY 11
AT OTHER PLACES
Work/business related 12
Service private vehicle (gas, oil lube, etc.) 13
Routine shopping (groceries, clothing, convenience store, HH maintenance).....14
Shopping for major purchases or specialty items (appliance, electronics, new vehicle, major HH repairs) ...15
Household errands (bank, dry cleaning, etc.).....16
Personal business (visit government office, attorney, accountant) 17
Eat meal outside home 18
Health care (doctor, dentist).....19
Civic / religious activities.....20
Outdoor recreation/entertainment 21
Indoor recreation/entertainment.....22
Visit friends/relatives 23
Loop Trip 96
Other (SPECIFY).....97

Secondary Trip purpose: TPUR2
Universe: All

420 And what else did <YOU> do there?

NO OTHER ACTIVITIES.....00
AT MY HOME
Working at home (for pay).....01
All other at home activities.....02
AT MY WORK LOCATION
Work/Job.....03
All other activities at Work.....04
AT MY PRIMARY VOLUNTEER LOCATION
Volunteer work/activities.....05
AT MY SCHOOL:
Attending Class.....06
All other activities at school.....07
WHILE TRAVELING
Change type of transportation/transfer.....08
Dropped off passenger/driver from car.....09
Picked up passenger from car.....10
OTHER - SPECIFY.....11
AT OTHER PLACES
Work/business related.....12
Service private vehicle (gas, oil lube, etc.).....13
Routine shopping (groceries, clothing, convenience store, HH maintenance).....14
Shopping for major purchases or specialty items (appliance, electronics, new vehicle, major HH repairs) 15
Household errands (bank, dry cleaning, etc.).....16
Personal business (visit government office, attorney, accountant).....17
Eat meal outside home.....18
Health care (doctor, dentist).....19
Civic / religious activities.....20
Outdoor recreation/entertainment.....21
Indoor recreation/entertainment.....22
Visit friends/relatives.....23
Loop Trip.....96
Other (SPECIFY).....97

Departure Time: DEPTM
Universe: All

421 IF LAST PLACE OF THE DAY, ENTER 0259 OTHERWISE: What time did <YOU> leave for the next place?

Stops along your Travel: CHCK
Universe: PLANO>1

422 Did <YOU> make any stops along your travel to <PLNAM> (this place), such as a quick errand, to stop for fuel, grab some food, or to pick up drop off a friend or family member?

YES.....1
NO.....2

ADCK1
Universe: All

423 DID THEY HAVE ADDITIONAL TRIPS THEY DID NOT MENTION???

YES 1
NO 2

LASTR
Universe: DEPTM=0359

434 Did <YOU> make any additional trips after you were settled in for the evening, such as to run a quick errand, grocery shopping, video rental, grab a bite to eat, or to pick up drop off another person?

YES-GO BACK TO CHANGE DEPARTURE TIME AND COLLECT UNREPORTED TRIPS 1
NO-CONTINUE TO NEXT PERSON 2

ADCH1
Universe: All

435 DID THEY HAVE ADDITIONAL TRIPS THEY DID NOT MENTION???

YES 1
NO 2

Reason for No Trips: NOGO
Universe: PTRIPS=0

436 So, <YOU> made no trips, including for work or school? Why not? IF TRAVELED: BACK UP AND ENTER MISSING TRIPS

PERSONALLY SICK 01
CARETAKING SICK KIDS 02
CARETAKING SICK OTHER 03
HOME-BOUND ELDERLY OR DISABLED 04
WORKED AT HOME FOR PAY 05
WORKED AROUND HOME (NOT FOR PAY) 06
OUT OF AREA 07
OTHER. SPECIFY 97
DID TRAVEL 98

Internet Use for Shopping in place of making trip: INUSE
Universe: All

438 Did <YOU> shop on the internet on the assigned travel date in place of making an out-of-home trip?

Yes 1
No 2
DK 8
RF 9

Appendix C: Interviewer Training Manual

Massachusetts Travel Survey

Interviewer Training Manual

Survey Conducted on Behalf of:

massDOT
Massachusetts Department of Transportation

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Massachusetts Travel Survey Project Information

Study Purpose:

- **The Massachusetts Department of Transportation is developing a new plan for guiding future growth and transportation investment in Massachusetts. The plan will assist MassDOT in future transportation improvements that will benefit Massachusetts at both a local level as well as at a statewide level.**

- **To plan transportation improvements and other projects that affect mobility, access to jobs, air quality, and quality of life.**

Qualifications:

Adult in the household 18 years or older

Live Program:	**http://luna.datasource.us/intweb.dll/vcc/MASS_FS**
Dial Code:	**ED 3030 SM 2030**
Study area:	**Massachusetts**
Time Zones:	**Eastern Time (1 hour ahead of Texas)**
Dialing Hours:	**9AM-8 PM Mon-Fri 11-7PM Sat 12-7PM Sun**
Avg Survey Length:	**18 minute Recruit / 25 Minute Retrieval**
Goal CMs:	**22,000 Recruits / 15,000 Retrievals**
Goal CPH:	**0.95 Recruitment / 0.9 Retrieval**
Language:	**English and Spanish Portuguese and other languages will need to be tracked for client's needs)**
Survey Method:	**CATI and Mail (contact card input – telephone, mail, web)**
Prod. Coord:	**Arman Moreno/Meagan Brackin**
QC Coord:	**Jeremy Frost**
Toll Free DS Hotline:	**1-888-222-7734**
Client Contact:	**Bob Frey (pronounced "fry") 1-617-973-8900 E-mail- travelsurvey@eot.state.ma.us**
Informational Website(s):	**www.mass.gov/eot/travelsurvey**

Massachusetts Travel Survey Overview

1. What is the Massachusetts Travel Survey?

The Massachusetts Travel Survey (MTS) is the first in-depth study of the state's household travel and activity patterns since 1991. From spring 2010 to spring 2011, the Massachusetts Department of Transportation (MassDOT) will ask 22,000 households to identify where and how they traveled on a specific, designated travel day (24 hours) with a goal of actually collecting these data from a minimum of 15,000 households.

To ensure a sample that is representative of Massachusetts households, each household will be asked a series of detailed questions about their socioeconomic characteristics and access to transportation. When completed, these data will be used to estimate how much travel is generated by all households in each of the state's metropolitan planning organization (MPO) regions, which include all major communities from Plymouth to Pittsfield, New Bedford to Newburyport, Cape Cod, the islands, and all rural areas as well.

MassDOT has contracted with NuStats to help design and execute this survey. All interviewers will be informing households that they are calling concerning the Massachusetts Travel Survey on behalf of MassDOT. You are not a MassDOT employee, but rather working on their behalf.

2. What is the purpose of the Household Travel Survey?

The purpose of this survey is to provide MassDOT with demographic and travel behavior data they need to update their travel demand model. With the information collected, MassDOT can better plan roadway improvements, address traffic congestion, and plan for future transportation needs.

3. What does the Travel Survey consist of?

The Travel Survey consists of five basic components:

- **Advance Mailing** – All sampled households will be sent an advance letter and brochure. For unmatched households (i.e., no land-line telephone number could be found for the sampled address), these households will be offered a $25 incentive. These households are likely "no-phone" or "cell phone only" households and are therefore hard-to-survey. The unmatched households will also be sent a "Contact Card" in which they can mail it back, call us, or go to our website to enter their contact information. These households can participate via mail (both recruitment and retrieval) if they wish to do so.

- **Recruitment Call -** Respondents are called and invited to participate in the Massachusetts Travel Survey. Interviewers will provide details regarding the study, and collect household demographic information for the household and each person within the household. Data for each vehicle available to the household will also be collected. At the conclusion of the interview, the interviewer assigns the respondent a specific travel day. Each member of the household will then be mailed a personalized travel diary. All household members will then use the diaries to record any travel that occurs for the assigned travel day. Each assigned travel day begins at 3:00 a.m. and continues until 2:59 a.m. the following day.

- **GPS –** A Global Positioning System (GPS) component is part of this study among a subset of pre-selected households. Each GPS household will have person-based units deployed (ages 16-75) for a period of two consecutive weekdays. If the travel day is a Monday, Tuesday, Wednesday, or Thursday, each recruited household will use the unit for two days. If a travel day falls on a Friday, then they will use the unit(s) for four days (Friday-Monday).

  Because there is interest in ensuring a representative sample, households that do not speak English or Spanish will be tracked (i.e., Portuguese and "other" languages). The client will track these non-English/Spanish speaking households by geography and will attempt to include them in the survey if warranted.

- **Mailing of Diaries and GPS Deployment –** The day following recruitment, all households will be mailed a personalized diary along with a cover letter thanking them for their participation. Data for each GPS recruited household will be sent to GeoStats for processing and deployment. GPS packages (letter, instructions, diaries, and GPS units) will be assembled in Boston and shipped to households. GPS households will be provided with a return label for shipment back to GeoStats' deployment team for data downloading and preparation for the next shipment.

- **Reminder Call-** On the night before the respondent's travel day, interviewers will contact the respondent to remind them about their travel day and also to confirm that their household travel diaries were received. GPS households will be reminded of the process as well. For households in which contact is not made and an answering machine is available, a message will be left reminding them of the travel day, a reminder to record addresses, and if a GPS household, how many days to deploy (again, four days for Friday travelers).

- **Retrieval-** Retrieval for the household begins the day after the assigned travel day. Interviewers contact the respondent and collect the household's travel info for that day. Travel data is collected using a combination of CATI and Trip Tracer (an interactive mapping program).

4. <u>Interviewer Tips/Protocols:</u>

- When administering the survey, be sure to speak clearly and control the pacing of the interview. Speaking too fast/too slow can cause the respondent to lose interest in the survey and potentially refuse.

- Utilize the Massachusetts Pronunciation guide to correctly pronounce town names. Incorrectly pronouncing a town name can decrease the respondent's willingness to participate in the survey.

- <u>All</u> survey questions are to be read strictly <u>verbatim</u>.

- Respondents should be addressed as Mr./Mrs. LAST NAME instead of Mr/Mrs. FIRST NAME.

- All interviewers are required have their training materials present at all times, and to be prepared to field respondent questions as needed.

5. Incentives

In addition to providing respondents with an opportunity to help plan for transportation improvements in the state, certain respondents are offered an incentive for participation. However, only certain households will receive incentives. For this reason, **NEVER** mention anything about an incentive unless the program prompts you to do so. The incentive break down is as follows:

Cell Phone Contacts: If the respondent is providing their information on a cell phone, we can offer an incentive of $5. However, we ONLY offer this incentive IF the respondent complains/is concerned regarding their cell phone minutes. If a respondent is providing information on a cell-phone but never mentions a concern about their minutes- then we do NOT offer a $5 incentive. Respondents receive this incentive 8 to 10 weeks after the retrieval info is provided.

Unmatched/Targeted Sample Incentives. Households from the unmatched sample will be offered $25. These are likely non-telephone or cell-only households and fall into the "hard-to-survey" market segment (targeted sample). There are other types of households that are typically hard to survey – e.g., young, low-income, high-income, zero-workers, etc. We will offer an incentive to these households as well. If a household falls into a category as "hard-to-survey," the CATI program will prompt you to offer the incentive.

GPS Incentives: Households selected for the GPS portion of the study receive 25$ per household member (Must be in the age range of 16-75) once their diary and GPS information is provided. (Incentive is mailed 8 to 10 weeks after retrieval info is provided)

A household may fall into more than one category. If they are a GPS household and fall into a "hard-to-survey" category, the GPS incentive prevails. If a household is not GPS and falls into more than one hard-to-survey category, then a maximum of $25 is offered. In summary:

GPS and targeted sample - $25 per household member (Age range 16-75)

GPS and not targeted sample - $25 per household member (Age range 16-75)

Not a GPS household but targeted sample and/or unmatched - $25 for household

Not a GPS and not targeted and not unmatched- $0

Massachusetts Travel Survey FAQ

Who is being asked to participate in the Survey?

Participants in the survey will be randomly selected from a list of household addresses to ensure participation from all thirteen MPOs in the Commonwealth and from different community types. Household addresses with a land line phone number will be contacted by phone. Those households without a land line phone number (including cell phone only households or non-telephone households) will be contacted by mail through the advance mailing step. The unmatched land line telephone households will be sent a contact card and asked to provide their contact information through the project website (using a personal identification number), by calling us directly, or mailing their contact card back to us. A letter and brochure will be sent to all household addresses requesting their participation whether matched or unmatched with a land line telephone number.

What will be done with the data collected from the survey?

The data collected from participating households will be statistically summarized to describe a variety of typical daily activities and resulting travel patterns. For example, what general activities do people engage in, what means of travel do they use to get to these activities, where are these trips coming from and going to, to what extent are the trips linked together, at what time of day are the trips made, and so on.

How will the Commonwealth and the MPOs use the information?

This information is vital to forecasting future travel patterns and needs at the state, regional, and local levels. Travel forecasts are used to help evaluate and prioritize proposed transportation projects for federal funding. All types of projects (highway, transit, bicycle, pedestrian) are considered.

The data will not be used for marketing purposes or be sold to third-party vendors for that purpose. All information collected will be held in strict confidence.

What is meant by "travel" and "activity"?

For this survey, "travel" means going from one place to another for any reason. "Activities" are the general categories of things you're doing – and the reason for your travel. These could be going to work, shopping, visiting friends, attending an event, or even just going for a walk in the neighborhood (a "loop trip" where there is not clear destination).

The survey is designed to collect each "leg" of a trip. For example, if a person walks to a bus stop, rides the bus, transfers to another bus, and then walks to their final destination, this is four trips and each should be collected as such. Likewise, if a person drives to a bus stop, rides the bus, and then walks to their final destination, these are counted as three separate trips.

How long will the survey take?

The initial phone interview to screen a household and collect demographic data usually takes between 15 and 20 minutes and will depend on the number of household members and the number of vehicles the household owns or has available. If the respondent agrees to participate, you will then ask them to agree to an assigned travel day. If they agree with that date or select another day with the interviewer (i.e., not out of convenience but only if the entire household will not be in the state), then NuStats will send the household a travel diary for each household member and instructions on how to fill out the diary on their travel day.

Afterwards, the household will be contacted the day before their scheduled travel day to help remind them of the travel day and to answer any questions. This is a five-minute call.

The travel day will begin at 3:00 AM and last for 24 hours. The respondent will be asked to simply record all trips as they would normally occur throughout the day. If the respondent records their travel throughout the day, the recording time will be will be minimal. If they record their trips at the end of the day, it may take additional time to recall each and every trip.

The day after the travel day, retrievers call to collect the household's results. Depending on the amount of persons in the household, this will take from 20 to 30 minutes. After the data is collected over the phone, the household is asked to mail the diaries to NuStats' data collection facility.

If there are any questions about the respondent's recorded trip data, they will receive a follow-up phone call. This follow-up call should not take any more than a few minutes.

Why should the respondent participate?

This is the respondent's opportunity to help their community! Surveys of this type are usually not taken more than once in a decade (or even longer). There are more than 2.6 million households in Massachusetts. If respondents participate, their household will be one of about 15,000 selected to represent all the rest. When respondents participate, they ensure that their travel needs and behavior are included in the survey. This information helps build a fuller, more accurate picture of local transportation needs, and ensure that public funds for improvements are spent where they are needed most.

Local and state decision-makers require accurate, updated travel information to make the best recommendations for improvements, and to maintain federal funding eligibility for transportation projects. The respondent's information will be used to help manage the transportation system efficiently and effectively, and will enable Massachusetts to get the most value out of future transportation investments. Making wise transportation investments can provide better access to jobs and housing, reduce traffic congestion, and increase mobility – all of which can improve our economy, our environment, and our quality of life.

If a respondent has ever wondered how they might influence the traffic they sit in daily, this is their chance to play a part in improving the situation!

Can the respondent participate even if they don't get a recruitment call from a phone interviewer?

Due to the need to gather statistically accurate information that represents the study area, we can only include randomly chosen households. If a respondent wishes to see if they are one of the randomly selected participants, please have them call 1-888-222-7734.

Why do we want to know about the characteristics of people in the household?

We ask a number of questions about households and the people in them because we are not only trying to describe travel patterns but also to understand why they occur. By collecting household characteristics along with travel patterns, we are able to better understand why people travel the way they do and this enables us to estimate future travel patterns as the population grows and changes.

Why do we want to know about the respondent's activities?

When transportation planners can better understand how people's activities are arranged and how travel plans are made, it helps them to make better recommendations for improvements that could ultimately make it easier for respondents to get where they're going.

Will any of the information collected be useful for environmental purposes?

Yes. The survey contains questions about vehicles in the household how those vehicles are used during the travel period. It is important to know what type of vehicles are being used, which helps to estimate fuel consumption and greenhouse gas emissions resulting from daily travel patterns. Improving air quality by reducing vehicle emissions is an important part of transportation planning and decision-making. The survey will also ask about respondent's walking or bicycling to/from various locations and activities. This information may help to improve infrastructure that would support more non-motorized trips to reduce carbon emissions and the need for petroleum-based transportation.

Will the respondent's individual data be made public?

NO, the survey is strictly confidential. All survey responses will be separated from any personal identifying information before the results are provided to the Commonwealth and the 13 MPOs. Data provided to each MPO will be summarized by geographic and socioeconomic categories before being made public.

Will the respondent's information from the survey be available to the public?

Their specific activities and travel patterns will remain strictly confidential, as will any contact information name, phone number, email address, etc.). Key findings about travel patterns drawn from the survey will be published following completion and analysis of the survey. This information will be general in nature and will relate to the state and regional transportation needs.

What if the respondent doesn't feel comfortable answering some of the questions?

We promise strict confidentiality of all the information collected but, of course, the respondent decline to answer any question. However, interviewers need to ensure the proper probing and rebutting procedures are used to alleviate any concern a respondent may have about a particular question.

Why is the travel and activity log so important?

Past experience has shown that if respondents do not use a log to record their travel and activities, they forget key details about what they've done and the places they've been. It is really important that all trips, even short stops in the evening, and all activities no matter how routine are captured in the survey.

How much detail is needed on each place the respondent visits?

Detailed location information is an important part of analyzing travel patterns. Providing detailed information such as the bus stop/train station, street address, town, zip code, cross street and nearby landmark will enable transportation planners to see which streets, highways, and transit services are being used. When a respondent visits a place and records it in their travel diary, providing as much detail as possible about ***where*** the place is will reduce the amount of information that that will need to be clarified during the retrieval interview, and ultimately make the effort less time-consuming for everyone (including you!).

What if out-of-the-ordinary events happen during my assigned travel period that changes my travel?

On any given day, many households across the state have a "non-ordinary" travel day. But collectively, all these variations – less travel, more travel, and different travel – have a major effect on the overall travel patterns generated by thousands of households. So even if the assigned travel period turns out to be out-of-the-ordinary for the respondent or any family member, it is important that the respondent records their travel in the travel logs for the assigned period. In statistical terms, accounting for these variations produces survey results that better represent the true travel picture overall.

What if the respondent traveled out of Massachusetts during my travel period?

If the respondent travels out of the state during their assigned travel period, they will be asked to provide us the details of all travel and activities completed within Massachusetts, and where they first went when they left the state (for example, commuting to a job in Providence or Nashua, or a trip to the airport and then a flight to Chicago). If the respondent returns to the state during the travel period, they will be asked to tell us about their travel and activities once they're back in Massachusetts.

What if the respondent doesn't drive a car?

We are interested in all types of travel – by train, bus, ferry, walk, bicycle, car, truck…any means used to get around.

What if the respondent doesn't travel very much?

Some people feel that just because all they did during their "travel period" was visit a friend or go to the post office, this information would not be important. In fact, these people, as well as those who don't travel at all during their travel period, are just as important as someone who did. Remember that the purpose of the survey is to get a complete picture of travel patterns throughout the state. So during the respondent's travel period, we'd like to know even if the respondent doesn't travel at all.

What if the respondent has additional questions?

For more information, please visit www.mass.gov/eot/travelsurvey

For specific questions on filling out the travel diary, call toll-free: **1-888-222-7734**

For related or additional questions, please contact:

NuStats

Jeff Livingston
1-800-447-8287, ext. 2256
travelsurvey@nustats.com

MassDOT

Bob Frey
1-617-973-8900
travelsurvey@eot.state.ma.us

Massachusetts Pronunciation Guide

The following list of Massachusetts cities and towns have somewhat unusual pronunciations. In addition to the text below, audio samples will be used to help interviewers to understand the local dialect. Please note that each interviewer will need to pass a pronunciation test demonstrating a general knowledge of the local dialect before being allowed to dial.

Note: Many, but not all, Massachusetts residents "drop their Rs" – meaning the vowel before the R is all that is heard. It often comes across as an "h" sound at the end of words. In most cases, it is not critical that you pronounce it this way, but the guide below is provided to help you understand the respondent. There are a few towns and cities to which you should pay particular attention, and they are marked with an asterisk (*****):

Abington AB-ING-TON

Acton ACK-TON
Agawam AG-UH-WAHM
Allston ALL-STUN
Amesbury AIMS-BER-EE
Amherst- AM-HURST
Andover AN-DOV-ER (sometimes "er" pronounced "uh")
Arlington AH-LIN-TIN ("r" is silent and "g" is silent)
Ashburnham ASH-BURN-UM (second "h" is silent)
Ashland ASH-LAND
Athol A-THOL
Attleboro- ATTLE-BORO
Auburn- AW-BURN or OBBIN (sometimes "ur" pronounced "uh")
Ayer AIR (single syllable)
Barnstable BAHN-STUBBLE ("ar" pronounced "ah")
Barre BEAR-REE
Bedford BED-FUD ("or" pronounced "uh")
Bernardston BURN-ARD-STON (sometimes "ar" pronounced "ah")
Beverly- BEV-ER-LY (sometimes "er" pronounced "ah")
***Billerica** BILL-RICK-A ("e" is silent)
Bourne- BORN
Brewster- BROO-STUH ("er" pronounced "ah")
Brighton- BRIGHT-UN ("o" is silent)
Cambridge- CAME-BRIJ
Canton- CANT'N ("o" is silent)
Carver- CAH-VAH (sometimes "er" pronounced "ah")
Charlemont SHAR-LA-MONT
Chatham- CHATUM
Chelmsford- CHEMS-FID ("l" is silent and "or" pronounced "id")
Chicopee CHIC-UH-PEE ("oh" is pronounced "uh")

Clinton- CLIN-TN (“o” is silent)
Cohasset- KOH-HASS-ET
Concord- CONK-ID (“or” pronounced “id”)
Danvers- DAN-VUS (“er” pronounced “uh”)
Dartmouth DART-MUTH (“o” is silent)
Dedham- DEAD-UM (“h” is silent)
Dighton DI-TON
Dorchester- DAH-CHES-TER (sometimes “Dor” is pronounced “Dah”)
Dunstable DUNS-TA-BLE
Duxbury DUCKS-BURY
East Weymouth- EAST WAY-MUTH (“Mouth” is pronounced “Muth”)
Everett EV-RETT
Fairhaven- FAIR-HAY-VEN
Falmouth FAL-MUTH (“mouth” is pronounced “muth”)
Florence- **FLAWR**-ENCE
***Gloucester** GLOSS-TER (The “ces” part is silent)
Goshen- GO-SHN (The “I” is silent)
Groton- GRAWT-N (The “O” is silent)
Groveland GROVE-LAND
Hampden HAM-DEN (The “P” is silent)

Harvard- HAH-VUD (The “R” is silent,)
Harwich- HAR-RICH
***Haverhill** HAV-RILL (long A as in “save” the “er” is silent)
Hingham- HING-UM (“Am” is pronounced “Um)
Holyoke HOLY-OKE
Ipswich- IPS-WHICH

Lancaster- LAN-KESS-TAH
Leicester LESS-TER (“I” is silent)
***Leominster** LEM-INSTER (“O” is silent)
Leyden LAY-DEN
Marblehead- MAHBL-HEAD
Marlborough- MARL-BORROW or MALL-BROW (First “R” is silent, borough pronounced “Brow”)
Mattapoisett MATTA-POIS-ETT
***Methuen** METH-OO-EN

Monson- MAHN-SUN (“Son” is pronounced “Sun”)
Montague MONT-A-GUE
Mount Washington- MOUNT WASHEN'TIN (“G” is silent, “Ton” is pronounced “Tin”)
Nahant NAH-HAUNT
Natick NAY-TICK

Northfield- NORTH FIELD
Norton- NORT-IN (“Ton” is pronounced “Tin)
***Peabody** PEA-BUD-E (“Bod” is pronounced “Bud”)
Pelham- PEL-UM (“H” is silent, “Am” is pronounced “Um”)
Pepperell- PEP-RIL (“Rell” is pronounced “Ril”)
Petersham PETER-SHAM
*** Quincy** QUIN-ZEE
Raynham RAIN-AM (“H” is silent)
Reading RED-ING (“Read” is pronounced “Red”)
*** Rehoboth** Ruh-HOE-buth
Rochester- RAWCH-IS-TUH (“Roch” is pronounced “Rawch”, “Ter” Pronounced “Tuh”)
Rockland- ROCK-LIND (“Lan” is pronounced “Lin”)
Rowley RAUL-LE (“Y” is silent)
***Salisbury** SAWLS-BURY
Saugus SAW-GUS
***Scituate** SIT-CHOO-IT (“A” is silent)
Seekonk SEE-KONK
Sherborn SHER-BORN (sometimes “Sher” is pronounced “Share”)
Shrewsbury SHROOS-BURY
Spencer- SPEN-SUH (“R” is silent, “Cer” pronounced “Suh”)
Stoneham- STONE’M (“H” and “A” are silent)
Stoughton STOW-TON
Sunderland- SUN-DUH-LIND (“R” is silent, “Land” pronounced “Lin”)
Swansea SWAN-ZEE (“Sea” pronounced “Zee”)
Taunton TAUN-TON
***Tewksbury** TUKS-BURY (“Tewks” pronounced “Tuks”)
***Tyngsborough** TINGS-BORO (rhymes with kings)
Wareham Ware-UM (“H” is silent, “Ham” is pronounced “Um”)
Wellesley WELLS-LEE
Westport- WES-PORT
***Weymouth** WEY-MUTH (“Mouth” is pronounced “Muth”)
Winchendon WINCH-EN-DON

Winchester- WIN-CHESS-TER
Winthrop- WIN-THRUP (“Throp” is pronounced “Thrup”)
***Woburn-** WOO-BURN (sometimes “R” is silent, “Burn” is pronounced “Bin”)
***Worcester** WUHS-TER (or WUHS-TAH)
Yarmouth YAR-MUTH (“Mouth” is pronounced “Muth”)

Key Study Area Info:

Surrounding Geography: Massachusetts is bordered on the north by New Hampshire and Vermont; on the west by New York; on the south by Connecticut and Rhode Island; and on the east by the Atlantic Ocean.

Major Roads: Interstate highways include: I-91, I-291, I-84, I-93, I-95, I-495, I-195, I-395, I-90 (The Massachusetts Turnpike), I-290, and I-190. Other major thoroughfares are U.S. 1, Route 2, Route 3, U.S. Route 20, Route 24, and Route 128. I-95 around Boston is typically referred to as Route 128.

Air Ports: The major airport in the state is Logan International Airport. Bradley International Airport in Windsor Locks, Connecticut, TF Green Airport in Warwick, Rhode Island, and Manchester-Boston Regional Airport in Manchester, New Hampshire also serve as airports to the state as all three are located near the border.

Transit: The Massachusetts Bay Transportation Authority (MBTA) operates public transportation in the form of subway, bus and ferry systems in the Metro Boston area. It also operates longer distance commuter rail services throughout the larger Greater Boston area, including service to Worcester and Providence, Rhode Island.

Bridges: Key bridges in the study area include: Annisquam Bridge, Atherton Bridge Bardwell's Ferry Bridge Bartlett's Bridge, Bissell Bridge, Blackstone Viaduct, Burkeville Covered Bridge, Canton Viaduct, Carpenter Bridge, Double-arch Sandstone Bridge, Echo Bridge, Eliot Memorial Bridge, Golden Hill Bridge, Granite Keystone Bridge, Harris Street Bridge, Hoosac Tunnel, Linden Street Bridge, Medford Pipe Bridge, Middlefield-Becket Stone Arch, Railroad Bridge, District Needham Street Bridge, Newton Street Bridge, Old Covered Bridge, Old Town Bridge, Paul's Bridge, Ponakin Bridge, Quinepoxet River Bridge, Arthur A. Smith Covered Bridge, Walden Street Cattle Pass, Ware-Hardwick Covered Bridge

Counties: The fourteen counties, moving roughly from west to east, are Berkshire, Franklin, Hampshire, Hampden, Worcester, Middlesex, Essex, Suffolk, Norfolk, Bristol, Plymouth, Barnstable, Dukes, and Nantucket.

Metropolitan Planning Organization (MPO) Regions:

Berkshire MPO – all of Berkshire County;

Cape Cod MPO – all of Barnstable County;

Franklin County Council of Governments MPO – all of Franklin County;

Martha’s Vineyard MPO – all of Dukes County;

Nantucket MPO – all of Nantucket County;

Pioneer Valley MPO – all of Hampden and Hampshire Counties;

Central Massachusetts MPO – all of southern Worcester Cty and small parts of Middlesex County;

Montachusett MPO – all of northern Worcester County;

Merrimack Valley MPO – all of northern Essex County;

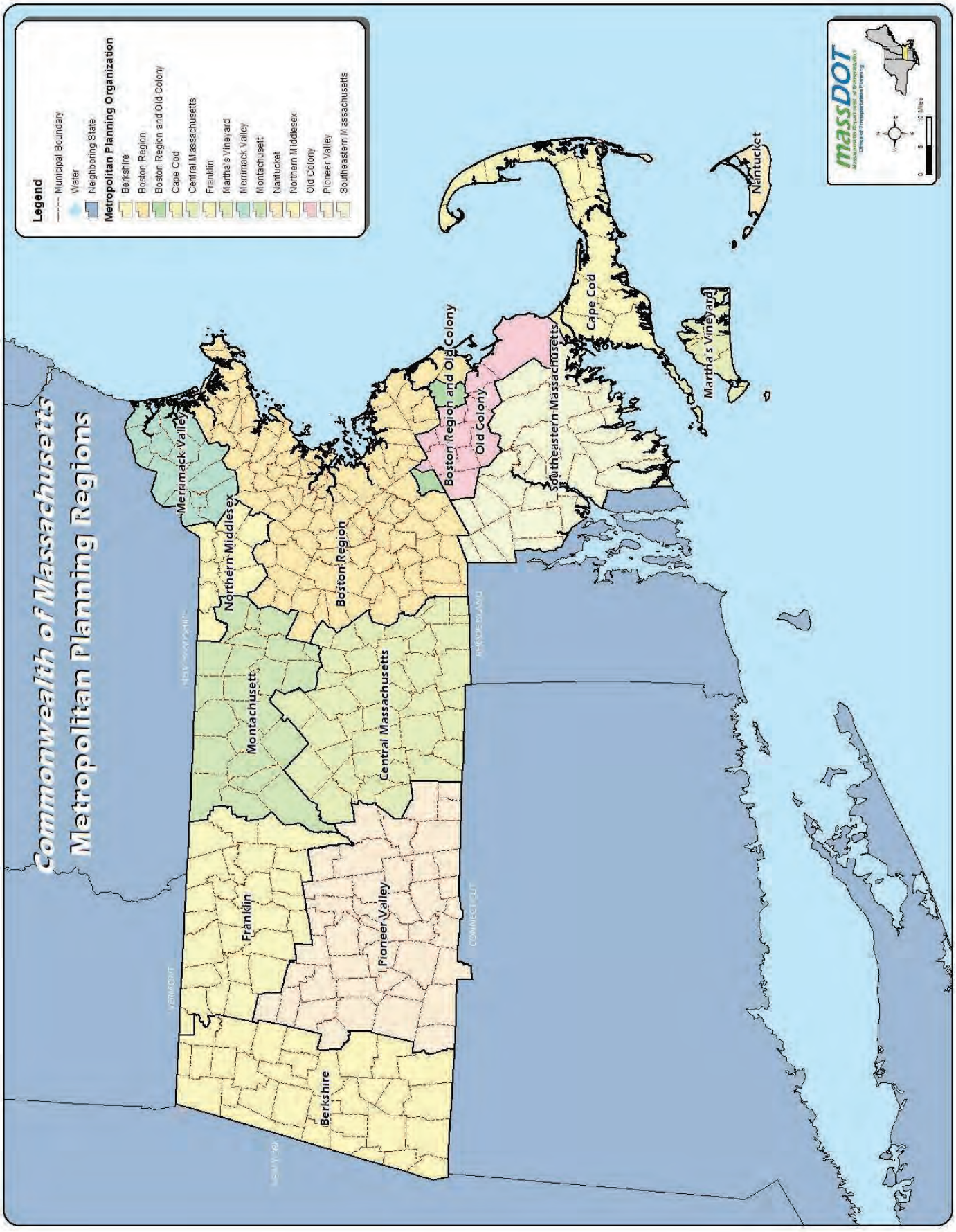
Metro Boston MPO – all of Suffolk County, all of southern Essex County, most of Middlesex and Norfolk Counties, some of Plymouth County, and a small part of Worcester County;

Old Colony MPO – part of southeastern Plymouth and parts of Norfolk and Plymouth Counties;

Southeastern Massachusetts MPO – all of Bristol County, much of southeastern Plymouth County, and a small part of Norfolk County;

Northern Middlesex Council of Governments MPO – small part of northwestern Middlesex County.

Note: the Towns of Pembroke and Stoughton have dual memberships in the Metro Boston and Old Colony MPOs.


Commonwealth of Massachusetts
Metropolitan Planning Regions
Legend
Municipal Boundary
Water
Neighboring State
Metropolitan Planning Organization
Berkshire
Boston Region
Boston Region and Old Colony
Cape Cod
Central Massachusetts
Franklin
Martha's Vineyard
Merrimack Valley
Montachusett
Nantucket
Northern Middlesex
Old Colony
Pioneer Valley
Southeastern Massachusetts
Merrimack Valley
Northern Middlesex
Boston Region
Boston Region and Old Colony
Old Colony
Southeastern Massachusetts
Cape Cod
Martha's Vineyard
Nantucket
Montachusett
Central Massachusetts
Franklin
Pioneer Valley
Berkshire
massDOT

Commonwealth of Massachusetts
County Boundaries
Legend
Municipal Boundary
Neighboring State
Water
County
BARNSTABLE
BERKSHIRE
BRISTOL
DUKES
ESSEX
FRANKLIN
HAMPDEN
HAMPSHIRE
MIDDLESEX
NANTUCKET
NORFOLK
PLYMOUTH
SUFFOLK
WORCESTER
massDOT
Massachusetts Department of Transportation
Office of Transportation Planning
0
5
10 Miles
N
NANTUCKET
DUKES
BARNSTABLE
PLYMOUTH
BRISTOL
ESSEX
MIDDLESEX
SUFFOLK
NORFOLK
WORCESTER
FRANKLIN
HAMPSHIRE
HAMPDEN
BERKSHIRE
VERMONT
NEW HAMPSHIRE
RHODE ISLAND
CONNECTICUT
NEW YORK

Appendix D: Final Data Dictionary

Note:
[ADMIN] = administrative variables
[COMP] = computed variables
[RECR] = data was obtained in Recruitment
[RETR] = data was obtained in Retrieval
[TT] = data was obtained in Trip Tracer (during retrieval)

Household File

Variable	Label	Values
SAMPN	Sample number [ADMIN]	
CATEGORY	Complete status [ADMIN]	
		1 Full Complete
		2 Valid Partial - half of adults
		3 Valid Partial - Unrelated HH
GPS	GPS type [ADMIN]	
		1 GPS Data Available for Household
		2 Household not in GPS Sample (GTYPE=2)
		3 Household in GPS Sample - Refused GPS Portion in Recruitment
NTYPE	NRFU flag [ADMIN]	
		1 NRFU Sample
		2 Non-NRFU Sample
LETTR	Household sent an advance letter [ADMIN]	
		1 Yes
		2 No
RETMODE	Retrieval Mode [ADMIN]	
		1 CATI
		2 Mailback
AREA	Area [ADMIN]	
		1 Ring 0-D
		2 Ring 0-O
		3 Ring 2N-D
		4 Ring 2N-O
		5 Ring 2S-D
		6 Ring 2S-O
		7 North-D
		8 North-O
		9 West-D
		10 West-O
		11 South-D
		12 South-O
		13 MV-D
		14 MV-O
		15 NM-D
		16 NM-O
		17 MR-D
		18 MR-O
		19 MR-O164
		20 FC-D
		21 FC-O
		22 BC-D
		23 BC-O
		24 PV-D
		25 PV-O
		26 CM-D
		27 CM-O
		28 CM-O164
		29 SR-D164
		30 SR-O164
		31 SR-D
		32 SR-O
		33 CCC-D
		34 CCC-O
		35 MVC-O
		36 NPED-O
		37 OC-D
		38 OC-O
MPO	MPO [ADMIN]	

CTFIP Household county [ADMIN]

25001	Barnstable County	25015	Hampshire County
25003	Berkshire County	25017	Middlesex County
25005	Bristol County	25019	Nantucket County
25007	Dukes County	25021	Norfolk County
25009	Essex County	25023	Plymouth County
25011	Franklin County	25025	Suffolk County
25013	Hampden County	25027	Worcester County

ASSN Travel day [ADMIN]

666	Monday, June 14	2010	739	Thursday, August 26	2010
667	Tuesday, June 15	2010	740	Friday, August 27	2010
668	Wednesday, June 16	2010	743	Monday, August 30	2010
669	Thursday, June 17	2010	744	Tuesday, August 31	2010
670	Friday, June 18	2010	745	Wednesday, September 1	2010
673	Monday, June 21	2010	746	Thursday, September 2	2010
674	Tuesday, June 22	2010	747	Friday, September 3	2010
675	Wednesday, June 23	2010	750	Monday, September 6	2010
676	Thursday, June 24	2010	751	Tuesday, September 7	2010
677	Friday, June 25	2010	752	Wednesday, September 8	2010
680	Monday, June 28	2010	753	Thursday, September 9	2010
681	Tuesday, June 29	2010	754	Friday, September 10	2010
682	Wednesday, June 30	2010	757	Monday, September 13	2010
683	Thursday, July 1	2010	758	Tuesday, September 14	2010
684	Friday, July 2	2010	759	Wednesday, September 15	2010
687	Monday, July 5	2010	760	Thursday, September 16	2010
688	Tuesday, July 6	2010	761	Friday, September 17	2010
689	Wednesday, July 7	2010	764	Monday, September 20	2010
690	Thursday, July 8	2010	765	Tuesday, September 21	2010
691	Friday, July 9	2010	766	Wednesday, September 22	2010
694	Monday, July 12	2010	767	Thursday, September 23	2010
695	Tuesday, July 13	2010	768	Friday, September 24	2010
696	Wednesday, July 14	2010	771	Monday, September 27	2010
697	Thursday, July 15	2010	772	Tuesday, September 28	2010
698	Friday, July 16	2010	773	Wednesday, September 29	2010
701	Monday, July 19	2010	774	Thursday, September 30	2010
702	Tuesday, July 20	2010	775	Friday, October 1	2010
703	Wednesday, July 21	2010	778	Monday, October 4	2010
704	Thursday, July 22	2010	779	Tuesday, October 5	2010
705	Friday, July 23	2010	780	Wednesday, October 6	2010
708	Monday, July 26	2010	781	Thursday, October 7	2010
709	Tuesday, July 27	2010	782	Friday, October 8	2010
710	Wednesday, July 28	2010	785	Monday, October 11	2010
711	Thursday, July 29	2010	786	Tuesday, October 12	2010
712	Friday, July 30	2010	787	Wednesday, October 13	2010
715	Monday, August 2	2010	788	Thursday, October 14	2010
716	Tuesday, August 3	2010	789	Friday, October 15	2010
717	Wednesday, August 4	2010	792	Monday, October 18	2010
718	Thursday, August 5	2010	793	Tuesday, October 19	2010
719	Friday, August 6	2010	794	Wednesday, October 20	2010
722	Monday, August 9	2010	795	Thursday, October 21	2010
723	Tuesday, August 10	2010	796	Friday, October 22	2010
724	Wednesday, August 11	2010	799	Monday, October 25	2010
725	Thursday, August 12	2010	800	Tuesday, October 26	2010
726	Friday, August 13	2010	801	Wednesday, October 27	2010
729	Monday, August 16	2010	802	Thursday, October 28	2010
730	Tuesday, August 17	2010	803	Friday, October 29	2010
731	Wednesday, August 18	2010	806	Monday, November 1	2010
732	Thursday, August 19	2010	807	Tuesday, November 2	2010
733	Friday, August 20	2010	808	Wednesday, November 3	2010
736	Monday, August 23	2010	809	Thursday, November 4	2010
737	Tuesday, August 24	2010	810	Friday, November 5	2010
738	Wednesday, August 25	2010	813	Monday, November 8	2010

814	Tuesday, November 9	2010
815	Wednesday, November 10	2010
816	Thursday, November 11	2010
817	Friday, November 12	2010
820	Monday, November 15	2010
821	Tuesday, November 16	2010
822	Wednesday, November 17	2010
823	Thursday, November 18	2010
824	Friday, November 19	2010
827	Monday, November 22	2010
828	Tuesday, November 23	2010
829	Wednesday, November 24	2010
830	Thursday, November 25	2010
831	Friday, November 26	2010
834	Monday, November 29	2010
835	Tuesday, November 30	2010
836	Wednesday, December 1	2010
837	Thursday, December 2	2010
838	Friday, December 3	2010
841	Monday, December 6	2010
842	Tuesday, December 7	2010
843	Wednesday, December 8	2010
844	Thursday, December 9	2010
845	Friday, December 10	2010
848	Monday, December 13	2010
849	Tuesday, December 14	2010
850	Wednesday, December 15	2010
851	Thursday, December 16	2010
852	Friday, December 17	2010
855	Monday, December 20	2010
856	Tuesday, December 21	2010
857	Wednesday, December 22	2010
858	Thursday, December 23	2010
859	Friday, December 24	2010
862	Monday, December 27	2010
863	Tuesday, December 28	2010
864	Wednesday, December 29	2010
865	Thursday, December 30	2010
866	Friday, December 31	2010
11103	Monday, January 3	2011
11104	Tuesday, January 4	2011
11105	Wednesday, January 5	2011
11106	Thursday, January 6	2011
11107	Friday, January 7	2011
11110	Monday, January 10	2011
11111	Tuesday, January 11	2011
11112	Wednesday, January 12	2011
11113	Thursday, January 13	2011
11114	Friday, January 14	2011
11117	Monday, January 17	2011
11118	Tuesday, January 18	2011
11119	Wednesday, January 19	2011
11120	Thursday, January 20	2011
11121	Friday, January 21	2011
11124	Monday, January 24	2011
11125	Tuesday, January 25	2011
11126	Wednesday, January 26	2011
11127	Thursday, January 27	2011
11128	Friday, January 28	2011
11131	Monday, January 31	2011
11132	Tuesday, February 1	2011
11133	Wednesday, February 2	2011
11134	Thursday, February 3	2011
11135	Friday, February 4	2011
11138	Monday, February 7	2011
11139	Tuesday, February 8	2011
11140	Wednesday, February 9	2011
11141	Thursday, February 10	2011
11142	Friday, February 11	2011
11145	Monday, February 14	2011
11146	Tuesday, February 15	2011
11147	Wednesday, February 16	2011
11148	Thursday, February 17	2011
11149	Friday, February 18	2011
11152	Monday, February 21	2011
11153	Tuesday, February 22	2011
11154	Wednesday, February 23	2011
11155	Thursday, February 24	2011
11156	Friday, February 25	2011
11159	Monday, February 28	2011
11161	Tuesday, March 1	2011
11162	Wednesday, March 2	2011
11163	Thursday, March 3	2011
11164	Friday, March 4	2011
11167	Monday, March 7	2011
11168	Tuesday, March 8	2011
11169	Wednesday, March 9	2011
11170	Thursday, March 10	2011
11171	Friday, March 11	2011
11174	Monday, March 14	2011
11175	Tuesday, March 15	2011
11176	Wednesday, March 16	2011
11177	Thursday, March 17	2011
11178	Friday, March 18	2011
11181	Monday, March 21	2011
11182	Tuesday, March 22	2011
11183	Wednesday, March 23	2011
11184	Thursday, March 24	2011
11185	Friday, March 25	2011
11188	Monday, March 28	2011
11189	Tuesday, March 29	2011
11190	Wednesday, March 30	2011
11191	Thursday, March 31	2011
11192	Friday, April 1	2011
11195	Monday, April 4	2011
11196	Tuesday, April 5	2011
11197	Wednesday, April 6	2011
11198	Thursday, April 7	2011
11199	Friday, April 8	2011
11202	Monday, April 11	2011
11203	Tuesday, April 12	2011
11204	Wednesday, April 13	2011
11205	Thursday, April 14	2011
11206	Friday, April 15	2011
11209	Monday, April 18	2011
11210	Tuesday, April 19	2011
11211	Wednesday, April 20	2011
11212	Thursday, April 21	2011
11213	Friday, April 22	2011
11216	Monday, April 25	2011
11217	Tuesday, April 26	2011
11218	Wednesday, April 27	2011
11219	Thursday, April 28	2011
11220	Friday, April 29	2011
11223	Monday, May 2	2011
11224	Tuesday, May 3	2011
11225	Wednesday, May 4	2011
11226	Thursday, May 5	2011
11227	Friday, May 6	2011
11230	Monday, May 9	2011

11231	Tuesday, May 10	2011
11232	Wednesday, May 11	2011
11233	Thursday, May 12	2011
11234	Friday, May 13	2011
11237	Monday, May 16	2011
11238	Tuesday, May 17	2011
11239	Wednesday, May 18	2011
11240	Thursday, May 19	2011
11241	Friday, May 20	2011
11244	Monday, May 23	2011
11245	Tuesday, May 24	2011
11246	Wednesday, May 25	2011
11247	Thursday, May 26	2011
11248	Friday, May 27	2011
11251	Monday, May 30	2011
11252	Tuesday, May 31	2011
11253	Wednesday, June 1	2011
11254	Thursday, June 2	2011
11255	Friday, June 3	2011
11258	Monday, June 6	2011
11259	Tuesday, June 7	2011
11260	Wednesday, June 8	2011
11261	Thursday, June 9	2011
11262	Friday, June 10	2011
11265	Monday, June 13	2011
11266	Tuesday, June 14	2011
11267	Wednesday, June 15	2011
11268	Thursday, June 16	2011
11269	Friday, June 17	2011
11272	Monday, June 20	2011
11273	Tuesday, June 21	2011
11274	Wednesday, June 22	2011
11275	Thursday, June 23	2011
11276	Friday, June 24	2011
11279	Monday, June 27	2011
11280	Tuesday, June 28	2011
11281	Wednesday, June 29	2011
11282	Thursday, June 30	2011
11283	Friday, July 1	2011
11286	Monday, July 4	2011
11287	Tuesday, July 5	2011
11288	Wednesday, July 6	2011
11289	Thursday, July 7	2011
11290	Friday, July 8	2011
11293	Monday, July 11	2011
11294	Tuesday, July 12	2011
11295	Wednesday, July 13	2011
11296	Thursday, July 14	2011
11297	Friday, July 15	2011
11300	Monday, July 18	2011
11301	Tuesday, July 19	2011
11302	Wednesday, July 20	2011
11303	Thursday, July 21	2011
11304	Friday, July 22	2011
11307	Monday, July 25	2011
11308	Tuesday, July 26	2011
11309	Wednesday, July 27	2011
11310	Thursday, July 28	2011
11311	Friday, July 29	2011
11314	Monday, August 1	2011
11315	Tuesday, August 2	2011
11316	Wednesday, August 3	2011
11317	Thursday, August 4	2011
11318	Friday, August 5	2011
11321	Monday, August 8	2011
11322	Tuesday, August 9	2011
11323	Wednesday, August 10	2011
11324	Thursday, August 11	2011
11325	Friday, August 12	2011
11328	Monday, August 15	2011
11329	Tuesday, August 16	2011
11330	Wednesday, August 17	2011
11331	Thursday, August 18	2011
11332	Friday, August 19	2011
11335	Monday, August 22	2011
11336	Tuesday, August 23	2011
11337	Wednesday, August 24	2011
11338	Thursday, August 25	2011
11339	Friday, August 26	2011
11342	Monday, August 29	2011
11343	Tuesday, August 30	2011
11344	Wednesday, August 31	2011
11345	Thursday, September 1	2011
11346	Friday, September 2	2011
11349	Monday, September 5	2011
11350	Tuesday, September 6	2011
11351	Wednesday, September 7	2011
11352	Thursday, September 8	2011
11353	Friday, September 9	2011
11356	Monday, September 12	2011
11357	Tuesday, September 13	2011
11358	Wednesday, September 14	2011
11359	Thursday, September 15	2011
11360	Friday, September 16	2011
11363	Monday, September 19	2011
11364	Tuesday, September 20	2011
11365	Wednesday, September 21	2011
11366	Thursday, September 22	2011
11367	Friday, September 23	2011
11370	Monday, September 26	2011
11371	Tuesday, September 27	2011
11372	Wednesday, September 28	2011
11373	Thursday, September 29	2011
11374	Friday, September 30	2011
11377	Monday, October 3	2011
11378	Tuesday, October 4	2011
11379	Wednesday, October 5	2011
11380	Thursday, October 6	2011
11381	Friday, October 7	2011
11384	Monday, October 10	2011
11385	Tuesday, October 11	2011
11386	Wednesday, October 12	2011
11387	Thursday, October 13	2011
11388	Friday, October 14	2011
11391	Monday, October 17	2011
11392	Tuesday, October 18	2011
11393	Wednesday, October 19	2011
11394	Thursday, October 20	2011
11395	Friday, October 21	2011
11398	Monday, October 24	2011

DAY Day of the week of travel [ADMIN]

1 Monday

2 Tuesday
3 Wednesday
4 Thursday
5 Friday

RIBUS Use transit on a regular basis during the week [RECR]
1 Yes
2 No
8 Don't Know
9 Refused

HHSIZ Household size [COMP- Count of persons in PER file]
RANGE: 1~7
8 8 or More
98 DK
99 RF

HHBIC Number of household bicycles in working condition [RECR]
98 DK
99 RF

HHVEH Household vehicles [COMP - Count of vehicles in VEH file]
RANGE: 0~7
8 8 or More
98 DK
99 RF

HISP Hispanic or Latino [RECR]
1 Yes
2 No
9 RF

RACE Ethnicity or race [RECR]
1 White Alone
2 Black or African American Alone
3 American Indian or Alaskan Native Alone
4 Asian Alone
5 Native Hawaiian, Pacific Islander Alone
6 Some Other Race Alone
7 Two or More Races
9 Refused

RESTY Description of home [RECR]
1 Single Family Detached Dwelling
2 Building with 2-4 Units
3 Building with 5-19 Units
4 Building with 20 or More Units
7 Something Else
8 DK
9 RF

O_RESTY [RESTY=7] Description of home, Other [RECR]

OWN Home ownership [RECR]
1 Own/Mortgaged
2 Renter
7 Other, Specify
8 DK
9 RF

O_OWN [OWN=7] Home ownership, Other [RECR]

CPLNS Number of cell phones [RECR]
98 DK
99 RF

PHLNS Number of landline telephone numbers [RECR]
- 98 DK
- 99 RF

FXLNS [IF PHLNS>1] Number of hard wired numbers dedicated to fax [RECR]
- 98 DK
- 99 RF

INCOME Household income in 2009 [RECR]
- 1 Less than $15,000
- 2 $15,000-$24,999
- 3 $25,000-$34,999
- 4 $35,000-$49,999
- 5 $50,000-$74,999
- 6 $75,000-$99,999
- 7 $100,000-$149,999
- 8 $150,000 or more
- 99 Don't Know/Refused

FUTUR Willing to participate in future studies [RETR]
- 1 Yes
- 2 No
- 3 Maybe/Depends
- 4 NOT ASKED –Mailback
- 8 Don't Know

HTRIPS Number of household trips [COMP]

HHWRK Number of household workers [COMP]

HHSTU Number of household students [COMP]

HHLIC Number of licensed drivers in household [COMP]

HADDR Household address [ADMIN]
HCITY Household city [ADMIN]
HSTATE Household state [ADMIN]
HZIP Household zip code [ADMIN]
HXCORD Household X-coordinates [ADMIN]
HYCORD Household Y-coordinates [ADMIN]

HOLIDAY Household Traveled on a Federal Holiday
- 1 Yes
- 2 No

HHWGT Household Weight
EXPWGT Household Weight, expanded to the population (ACS 2006-2010)

Person File

Variable	Label	Values
SAMPN	Sample number [ADMIN]	
PERNO	Person number [ADMIN]	
GEND	Gender [RECR]	
		1 Male
		2 Female
		9 Refused
AGE	Age [RECR]	
		98 98 years or older
		99 Don't Know/Refused
AGEB	[AGE=99] Age category if refused AGE [RECR]	
		1 Younger Than 16
		2 16 or Older
		9 Don't Know/Refused
RELAT	Relationship to Head of Household [RECR]	
		1 Respondent
		2 Spouse / Partner
		3 Child
		4 Parent
		5 Other Relative
		6 Not Relative
		9 Refused
LIC	[AGE>15 or AGEB>1] Valid driver's license [RECR]	
		1 Yes
		2 No
		8 Don't Know
		9 Refused
TRANS	[AGE>15 or AGEB>1] Have transit pass? [RECR]	
		1 Yes
		2 No
		8 Don't Know
		9 Refused
PASST1	[TRANS=1] Type of transit pass [RECR]	
PASST2	[TRANS=1] Type of transit pass [RECR]	
PASST3	[TRANS=1] Type of transit pass [RECR]	
		1 Local Bus Pass
		2 Link Pass
		3 Inner Express Bus Pass
		4 Outer Express Bus Pass
		5 Commuter Rail Pass
		6 Ferry / Board Pass
		7 Charlie Card
		97 Other, specify
		98 Don't Know
		99 Refused
O_PASST	[PASST=97] Type of transit pass, Other specify [RECR]	
EMPLY	[AGE>15 or AGEB>1] Employed [RECR]	
		1 Yes
		2 No
		8 Don't Know
		9 Refused
WORKS	[AGE>15 or AGEB>1] Does this person work? [COMP- IF EMPLY=1]	

1 Yes
2 No

WKSTAT [WORKS=2] Employment status [RECR]
1 Retired
2 Disabled/On Disability Status
3 Homemaker
4 Unemployed but looking for work
5 Unemployed and not looking for work
6 Student
97 Other, SPECIFY
99 Don't Know/Refused

O_WKSTAT [WKSTAT=97] Employment status, Other [RECR]

JOBS [WORKS=1] How many jobs? [RECR]

HOURS [WORKS=1] Hours worked per day [RECR]
RANGE: 1~24
98 DK
99 RF

WNAME [WORKS=1] Work name [RECR]

WDAYS [WORKS=1] Days per week at work [RECR]
RANGE: 1~7
8 Don't Know
9 Refused

WMODE [WORKS=1] Usual mode to work [RECR]
0 Works from home
1 Walk
2 Bike
3 Auto/Van/Truck Driver
4 Auto/Van/Truck Passenger
5 Bus / Public Transit
6 Dial-A-Ride/Paratransit
7 Taxi
8 Motorcycle Driver
9 Motorcycle Passenger
97 Other, SPECIFY
98 Don't Know
99 Refused

O_WMODE [WMODE=97] Usual Mode to Work, Other [RECR]

WTRSB [WMODE=5] What transit service do you normally use to get to work? [RECR]

TELEW [WORKS=1] Telecommute? [RECR]
1 Yes
2 No
8 Don't Know
9 Refused

SCHED [WORKS=1] Flexible work schedule? [RECR]
1 Yes
2 No
8 Don't Know
9 Refused

FLEXP1 [SCHED=1] Flexible programs offered [RECR]
FLEXP2 [SCHED=1] Flexible programs offered [RECR]
FLEXP3 [SCHED=1] Flexible programs offered [RECR]
1 9/80 Work Period
2 Early Arrival/Departure

3 4/40 Work Week
4 Flexible hours
7 Other, Specify
8 Don't Know
9 Refused

O_FLEXP [FLEXP=7] Flexible programs offered, Other Specify [RECR]

FLEXT [SCHED=1] Does he/she participate in this program(s)? [RECR]
1 Yes
2 No
8 Don't Know
9 Refused

EDISA [AGE>5] Disabled license Plate [RECR]
1 Yes
2 No
8 Don't Know
9 Refused

EDIS2 [AGE>5] Disabled transit registration [RECR]
1 Yes
2 No
8 Don't Know
9 Refused

EDUCA Level of education completed [RECR]
1 Not a high school graduate, 12th grade or less. (Includes very young children)
2 High school graduate (high school diploma or GED)
3 Some college credit but no degree
4 Associate or technical school degree
5 Bachelor's or undergraduate degree
6 Graduate Degree (includes professional degrees, MD, DDs, JD)
7 Other, SPECIFY
8 Don't Know
9 Refused

O_EDUCA [EDUCA=7] Level of education completed, Other [RECR]

ENROL Student [RECR]
1 Yes
2 No
8 Don't Know
9 Refused

FPTIM [ENROL=1] Full-time or part-time student [RECR]
1 Part-time
2 Full-time
8 Don't Know
9 Refused

SCHOL [ENROL=1]] School grade level attends [RECR]
1 Daycare
2 Nursery School, Preschool
3 Kindergarten to Grade 8
4 Grade 9 to 12
5 Technical/Vocational School
6 Two-year college (community college)
7 4-year College or university
8 Graduate School/Professional
97 Other, SPECIFY
99 Don't Know/Refused

O_SCHOL [SCHOL=97] School grade level attends, Other [RECR]

SNAME [ENROL=1] School name [RECR]

SMODE [ENROL=1] Usual mode to school [RECR]
- 0 Home schooled
- 1 Walk
- 2 Bike
- 3 Auto/Van/Truck Driver
- 4 Auto/Van/Truck Passenger
- 5 Bus / Public Transit
- 6 Dial-A-Ride/Paratransit
- 7 Taxi
- 8 School Bus
- 9 Motorcycle Driver
- 10 Motorcycle Passenger
- 97 Other, SPECIFY
- 98 Don't Know
- 99 Refused

O_SMODE [SMODE=97] Usual mode to school, Other [RECR]

STRSB [SMODE=5] What transit service do you normally use to get to school? [RECR]

TTRIP Transit Trips in past week [RECR]
- RANGE: 0~97
- 98 Don't Know
- 99 Refused

BIKFA [WORKS=1 or ENROL=1] Bike facilities available at work/school? [RECR]
- 1 Yes
- 2 No
- 8 Don't Know
- 9 Refused

BIKD1 [HHBIC>0] Days used bike for recreation last week [RECR]
- RANGE: 0~7
- 8 Don't Know
- 9 Refused

BIKD2 [HHBIC>0] Days used bike for transportation last week [RECR]
- RANGE: 0~7
- 8 Don't Know
- 9 Refused

BIKRD [HHBIC>0] Bike trails and lanes used [RECR]
- 1 Off-Road
- 2 On-Road
- 3 Both
- 8 Don't Know
- 9 Refused

INUSE Internet use during travel day for shopping in place of making a trip [RETR]
- 1 Yes
- 2 No
- 8 Don't Know
- 9 Refused

PTRIPS Person Trips [COMP]

CMPLG Completed travel log [RETR]
- 1 Yes, Completed
- 2 No, Not Completed
- 3 Did not receive materials
- 8 Don't Know
- 9 Refused

INTRV Interviewed in person [RETR]
1 Yes
2 No

PROXY [INTRV=2] Household member that served as proxy [RETR]

TYPDY [INTRV=1] In general, would you say that ASSN was a typical for you? [RETR]
1 Yes
2 No
3 Not asked -- Mail-in
8 Don't Know/Refused

O_TYPDY [TYPDY=2] Why not? [RETR]

TYPPL [INTRV=1] Were most of your travel and activities for this period planned in advance or did you change your plans as the day progressed? [RETR]
1 Yes
2 No
3 Not asked -- Mail-in
8 Don't Know/Refused

O_TYPPL [TYPPL=2] What happened that caused the change in plans? [RETR]

NOGO [PTRIPS=0] Reason for no trips [RETR]
1 Personally Sick
2 Caretaking Sick Kids
3 Caretaking Sick Other
4 Homebound Elderly or Disabled
5 Worked at Home for Pay
6 Worked Around Home (Not for Pay)
7 Out of Area
97 Other, SPECIFY

O_NOGO [NOGO=97] Reason for no trips, Other [RETR]

WADDR [WORKS=1] Work address [TT]
WCITY [WORKS=1] Work city [TT]
WSTATE [WORKS=1] Work state [TT]
WZIP [WORKS=1] Work zip [TT]
WXCORD [WORKS=1] Work X-coordinates [TT]
WYCORD [WORKS=1] Work Y-coordinates [TT]

SADDR [ENROL=1] School address [TT]
SCITY [ENROL=1] School city [TT]
SSTATE [ENROL=1] School state [TT]
SZIP [ENROL=1] School zip [TT]
SXCORD [ENROL=1] School X-coordinates [TT]
SYCORD [ENROL=1] School Y-coordinates [TT]

PWGT Person Weight
EXPPWGT Person Weight, expanded to the population (ACS 2006-2010)

Vehicle File

Variable	Label	Values
SAMPN	Sample number [ADMIN]	
VEHNO	Vehicle number [ADMIN]	
YEAR	Year of vehicle [RECR]	RANGE: 1900~2011 9998 Don't Know 9999 Refused
MAKE	Make of vehicle [RECR]	11 Acura 12 Audi 13 BMW 14 Buick 15 Cadillac 16 Chevrolet 17 Chrysler 18 Daewoo 19 Dodge 20 Ford 21 Geo 22 GMC 23 Harley Davidson 24 Honda 25 Hummer 26 Hyundai 27 Infiniti 28 Isuzu 29 Jaguar 30 Jeep 31 Kawasaki 32 Kia 33 Lexus 34 Lincoln 35 Mazda 36 Mercedes 37 Mercury 38 Mitsubishi 39 Nissan 40 Oldsmobile 41 Plymouth 42 Pontiac 43 Porsche 44 Range Rover 45 Saab 46 Saturn 47 Scion 48 Subaru 49 Suzuki 50 Toyota 51 Volkswagen 52 Volvo 53 Yamaha 97 Other, SPECIFY 98 Don't Know 99 Refused
O_MAKE	[MAKE=97] Vehicle make, other [RECR]	
MODEL	Vehicle model [RECR]	
BODY	Vehicle body type [RECR]	1 Car/Station Wagon 2 Van (any type) 3 SUV 4 Pickup Truck 5 Other type of truck 6 RV 7 Motorcycle 97 Other, SPECIFY 99 Refused
O_BODY	[BODY=97] Body type, Other [RECR]	
FUEL	Fuel type [RECR]	1 Gas 2 Diesel 3 Hybrid 4 Flex Fuel 7 Other, SPECIFY 8 Don't Know 9 Refused
O_FUEL	[FUEL=7] Fuel type, Other [RECR]	

USER Main user of vehicle [RECR]
RANGE: 1~9
98 Don't Know
99 Refused

CNTV Vehicle used on travel day? [RETR]
1 Used
2 Not used, specify reason

O_CNTV [CNTV=2] Reason vehicle was not used on travel day, Specify [RETR]

HHWGT Household Weight
EXPWGT Household Weight, expanded to the population (ACS 2006-2010)

Place File

Variable	Label	Values
SAMPN	Sample number [ADMIN]	
PERNO	Person number [ADMIN]	
PLANO	Place number [ADMIN]	
TPURP	Primary trip purpose [RETR]	
TPUR2	Other activities [RETR]	
		1 Working at home (for pay)
		2 All other home activities
		3 Work/Job
		4 All other activities at work
		5 Volunteer Work/Activities
		6 Attending Class
		7 All other School Activities
		8 Changed type of transportation
		9 Drop off passenger from car
		10 Pick up passenger from car
		11 While Traveling -- Other, Specify
		12 Work Business Related
		13 Service private vehicle (gas, oil lube, etc.)
		14 Routine shopping (groceries, clothing, convenience store, HH maintenance)
		15 Shopping for major purchases or specialty items (appliance, electronics, new vehicle, major HH repairs)
		16 Household errands (bank, dry cleaning, etc.)
		17 Personal business (visit government office, attorney, accountant)
		18 Eat meal outside of home
		19 Health care (doctor, dentist)
		20 Civic/Religious activities
		21 Outdoor recreation/entertainment
		22 Indoor recreation/entertainment
		23 Visit friends/relatives
		96 Loop trip
		97 Other, SPECIFY
O_TPURP	[TPURP=97] Primary trip purpose, Other [RETR]	
O_TPUR2	[TPUR2=97] Other activities, Other [RETR]	
MODE	[PLANO>1] Mode of trip [RETR]	
		1 Walk
		2 Bike
		3 Auto/Van/Truck Driver
		4 Auto/Van/Truck Passenger
		5 Public Transit Bus
		6 Train/Public Transit Rail
		7 Ferry/boat
		8 Dial-A-Ride/Paratransit
		9 Taxi
		10 School bus
		11 Motorcycle Driver
		12 Motorcycle Passenger
		97 Other, SPECIFY
O_MODE	[MODE=97] Mode of trip, Other [RETR]	
TOTTR	[PLANO>1 and MODE<>9 and <>10] Total people traveling (including respondent) [RETR] RANGE: 1~9	
		10 10 or More
		99 Refused
HHMEM	[PLANO>1 and MODE<>9 and <>10 and TOTTR>1] Number of household members on trip [RETR]	

PER1 [HHMEM>0] Household member on trip [RETR]
PER2 [HHMEM>1] Household member on trip [RETR]
PER3 [HHMEM>2] Household member on trip [RETR]
PER4 [HHMEM>3] Household member on trip [RETR]
PER5 [HHMEM>4] Household member on trip [RETR]

NONHH [PLANO>1 and MODE<>9 and <>10 and TOTTR>1] Non-household members on trip [COMP – TOTTR minus HHMEM]

VEHNO [MODE=3 or 4 or 11 or 12] Vehicle number [RETR]
RANGE: 1~8
97 Non-Household Vehicle

PRKTY [MODE=3 or 4 or 11 or 12] Parking location [RETR]
1 Parking Lot
2 Parking Garage
3 Street
4 Driveway/personal garage
5 Did not park
7 Other, SPECIFY
8 Don't Know
9 Refused

O_PRKTY [PRKTY=7] Parking Location, Other [RETR]

PLOC [MODE=3 or 4 or 11 or 12] Location of where person parked [RETR]
1 At Location
2 Off-Site
8 Don’t Know
9 Refused

PRKLC [MODE=3 or 4 or 11 or 12 AND PLOC>1] Location of where person parked [RETR]

PRKCS [MODE=3 or 4 or 11 or 12] Paid to park? [RETR]
1 Did not Pay
2 Did Pay, record amount
8 Don't Know
9 Refused

O_PRKCS [PRKCS=2] Paid to park, specify amount [RETR]

PRKUN [PRKCS=2] Unit of cost [RETR]
1 Hour
2 Per Day
3 Per Week
4 Per Month
5 Per Year
8 Don't Know
9 Refused

PRKHW [PRKCS=2] How parking was paid [RETR]
1 Cash/Credit/Debit Card
2 Per-Paid parking Pass
3 Employer-Provided Parking Pass
8 Don't Know
9 Refused

EPARK [PRKCS=2] How much did person pay out pocket? [RETR]
RANGE: 1~5000
9999 Don't Know/Refused

TOLL [MODE=3 or 4 or 11 or 12] Use a toll road? [RETR]
1 Yes
2 No
8 Don't Know

9 Refused

TOLLT [TOLL=1] Which toll road was used? [RETR]
1 Turnpike
2 Ted Williams Tunnel
3 Sumner Tunnel
4 Tobin Tunnel

TOLLE [TOLL=1] Where did you enter the toll road? [RETR]
TOLLX [TOLL=1] Where did you exit the toll road? [RETR]
1 West Stockbridge (Plaza 1)
2 Lee (Plaza 2)
3 Westfield (Plaza 3)
4 West Springfield/I-91 (Plaza 4)
5 Chicopee (Plaza 5)
6 Springfield / I-291 (Plaza 6)
7 Ludlow (Plaza 7)
8 Palmer (Plaza 8)
9 Sturbridge / I-84 (Plaza 9)
10 Worcester/Auburn/I-290 (10)
11 Worcester / Millbury (Plaza 11)
12 Framingham (Plaza 12)
13 Natick / Rt. 30 (Plaza 13)
14 Weston / Rt. 128 / I-95 14)
15 Newton / Boston / Weston (15)
16 West Newton (Plaza 16)
17 Newton Corner (Plaza 17)
18 Allston / Brighton (Plaza 18)
19 Allston / Brighton (Plaza 19)
20 Allston / Brighton (Plaza 20)
21 Allston / Brighton (Not specified)
22 Dartmouth Street (Plaza 22)
24 South Station/I-93 N/S (24)
25 South Boston (Plaza 25)
26 Westborough / I-495 (Plaza 26)
27 Worcester / Rt. 146 (Plaza 25)
30 Logan Airport (Summer Tunnel)
31 Logan Airport (TWT Airport)
37 Logan Airport (TWT Rte 1A)
39 Logan Airport (Not specified)
91 Massachusetts Avenue
92 Clarendon Street
93 Arlington Street
97 NOT ASKED—Mailback
98 Don't Know
99 Refused

TOLLC [TOLL=1] Toll road amount [RETR]
- 99 Don't Know/Refused

HOV [MODE=3 and TOTTR>2] Reason for using or not using HOV lane [RETR]

MODE2 [MODE=5 or 6] Transit mode type [RETR]
- 1 Local Bus
- 2 Express Bus
- 3 Shuttle Bus
- 4 Subway
- 5 Commuter Rail
- 9 Refused

FARE [MODE=5 or 6 or 7] How fare was paid [RETR]
- 1 Cash
- 2 Weekly Pass
- 3 Monthly Pass
- 4 Charlie Card
- 5 Student ID
- 6 Transfer
- 7 Charlie Ticket
- 97 Other, SPECIFY
- 98 Don't Know
- 99 Refused

O_FARE [FARE=97] Other payment type [RETR]

ROUTE [MODE=5 or 6 or 7] Transit route used [RETR]

ARR_HR Arrival hour (Military time) [RETR]
ARR_MIN Arrival minute (Military time) [RETR]

DEP_HR Departure hour (Military time) [RETR]
DEP_MIN Departure minute (Military time) [RETR]

TRPDUR [PLANO>1] Trip duration [CALC]

ACTDUR Activity duration [CALC]

NAME Place name [RETR]

ADDR Address [TT]
CITY City [TT]
STATE State [TT]
ZIP Zip [TT]
XCORD X-coordinates [TT]
YCORD Y-coordinates [TT]

PWGT Person Weight
EXPPWGT Person Weight, expanded to the population (ACS 2006-2010)

Route File

Variable	Label	Values
SAMPN	Sample number [ADMIN]	
PERNO	Person number [ADMIN]	
TRIPNO	Trip number [ADMIN]	
OPLANO	Origin place number (to link to Place file) [ADMIN]	
DPLANO	Destination place number (to link to Place file) [ADMIN]	
POINTNO	Point number [ADMIN]	
XCORD	X-coordinate [ADMIN]	
YCORD	Y-coordinate [ADMIN]	
DUMMY	Flag to indicate that Trip Tracer route was changed during verification [RETR]	

Appendix E: Weighting and Expansion Plan

MEMORANDUM

To: Bob Frey, Massachusetts Department of Transportation
Robert Sievert, Central Transportation Planning Staff

Date: February 14, 2012

From: Lucia Lanini and Sudeshna Sen, NuStats

Re: Massachusetts Travel Survey: Technical Memorandum on Survey Weighting

The purpose of this memorandum is to summarize the weighting methodology to be used on data collected during the Massachusetts Travel Survey. The memorandum includes the following sections:

I. Methodological Background and Summary

II. Household Weight

a. Sampling Weight

b. Raking Adjustment

c. Final Household Weight

III. Person Weight

I. Methodological Background and Summary

From a finite population sampling theory perspective, analytic weights are needed to develop estimates of population parameters and, more generally, to draw inferences about the population that was sampled. Without the use of analytic weights, population estimates are subject to biases of unknown (possibly large) magnitude. Consequently, analytic weights are crucial to obtain survey estimates with minimal bias.

The weighting approach utilized in this study accounts for the biases associated with sampling and robustness of the data collected. Specifically, the components of the analytic weights generated using this method are as follows:

- Sampling weights
- Raking adjustment

The analytic weights are computed at the household and person level. These weights adjust the relative importance of responses to reflect the different probabilities of selection of respondents, and align the sample distributions to population distributions.

II. Household Weight

Sampling Weight

The sampling weight reflects the probability of selection of a telephone number or an address from the sampling frame. Considering the dual-frame sampling framework employed in this study, separate sampling weights will be calculated for the listed residential and address-based sampling frames. Specifically, the sampling weight for a sampling unit j in the sampling frame, denoted as $W_{j,SampFr}$, is simply the reciprocal of the selection probability of the sampling unit.

$$W_{j,SampFr} = \frac{1}{\text{Prob}_{j,SampFr}}$$

where,

Sampling unit j is a landline number in the listed residential frame and an address in the address-based sampling frame.

Sampling frame $SampFr$ is listed residential or address-based sampling frame.

The sampling weights also adjust for oversampling of specific geographies or demographic groups of interest for which we had implemented controls to make sure that we have adequate observations in these groups. To illustrate, the sampling weight associated with address-based sample is simply computed as the number of addresses in the address-based frame divided by number of sample pieces ordered from the frame for the study area. It is important to note that the adjustments for oversampling were made at the aggregate level of the sampling frame type (instead of a specific geography).

Raking Adjustment

Raking improves the reliability of the survey estimates; hence, raking adjustments are used to align the weighted sample to population statistics from 2008-2010 American Community Survey (ACS). These adjustments will be made using raking variables. In particular, the aforementioned weights will be adjusted so that the sums of the adjusted weights are equal to known population totals for certain subgroups of the population defined by demographic characteristics and geographic variables. The variables used for raking at the household level are as follows:

- Household size
- Household income
- Total number of workers in the household
- Total number of vehicles in the household
- County of residence

These variables were chosen as the raking variables due to significant differences in the coverage by categories of these variables. Therefore, it is reasonable to expect that maximum bias reduction would be achieved using these variables. It is important to note that the missing values in the raking variables were imputed to calculate the raking adjustments. The raking procedure is based on an iterative proportional fitting procedure and involves simultaneous ratio adjustments to two or more marginal distributions of the population counts. The raking procedure is undertaken in a sequence of adjustments. First, the base weights are adjusted to one marginal distribution and then to the second marginal distribution, and so on. One sequence of adjustments to the marginal distributions is known as a cycle or iteration. The procedure is repeated until convergence is achieved. Following the raking procedure, the inordinately large weights, a by-product of raking, will be capped. In particular, the "very large" weights are capped to equal a maximum of five times the mean weight.

Final Household Weight

The final analytic weight is simply the product of sampling weight and raking adjustment. Following the computation of this weight, an expansion procedure is undertaken to get the final 'expanded' analytic weight. The expansion process simply takes the weighted total households and multiplies each household by a factor, when applied, expands the data to represent the universe of households in the study area. To derive the expansion factor, a simple division is used: Expansion Factor = N(Universe)/ N(Surveyed).

III. Person Weight

The person weight is a product of the final household weight and the person-level raking weight. Specifically, the person data weighted by the 'final household weight' was raked to align it to the population statistics from 2008-10 ACS data. The raking procedure is based on an iterative proportional fitting procedure. The variables used for raking at the person level are as follows:

- Hispanic Status
- Age

Following the raking procedure, the very large weights will be capped. The weights will then be expanded to reflect the total number of persons residing in the study area.

Appendix F: Recruitment Item Unweighted Frequencies

Table F-1: Household Size (Unweighted)

Household Size	Count	Percent
1	4123	27.4%
2	4829	32.1%
3	2538	16.9%
4	2424	16.1%
5	858	5.7%
6	201	1.3%
7	42	.3%
8	18	.1%
Total	15033	100.0%

Table F-2: Transit Used on Regular Basis (Unweighted)

Transit Used on Regular Basis	Count	Percent
Yes	4119	27.4%
No	10904	72.5%
Don't Know	10	.1%
Total	15033	100.0%

Table F-3: Household Bicycles (Unweighted)

Household Bicycles	Count	Percent
0	6114	40.7%
1	2418	16.1%
2	2775	18.5%
3	1426	9.5%
4	1311	8.7%
5	546	3.6%
6	249	1.7%
7	80	.5%
8	100	.7%
Don't Know	14	.1%
Total	15033	100.0%

Table F-4: Household Vehicles (Unweighted)

Household Vehicles	Count	Percent
0	1538	10 2%
1	4722	31.4%
2	5872	39.1%
3	2000	13 3%
4	615	4.1%
5	195	1.3%
6	63	.4%
7	15	.1%
8 or More	13	.1%
Total	15033	100 0%

Table F-5: Household Ethnicity (Unweighted)

Household Ethnicity	Count	Percent
White Alone	13075	87.0%
Black or African American Alone	621	4.1%
American Indian or Alaskan Native Alone	37	.2%
Asian Alone	276	1.8%
Native Hawaiian Pacific Islander Alone	8	.1%
Some Other Race Alone	562	3.7%
Two or More Races	293	1.9%
Refused	161	1.1%
Total	15033	100.0%

Table F-6: Hispanic or Latino Household (Unweighted)

Hispanic or Latino Household	Count	Percent
Yes	733	4.9%
No	14207	94.5%
Refused	93	.6%
Total	15033	100.0%

Table F-7: Household Residence Type (Unweighted)

Household Residence Type	Count	Percent
Single Family Detached Dwelling	9961	66.3%
Building with 2-4 Units	2746	18.3%
Building with 5-19 Units	1142	7.6%
Building with 20 or More Units	1131	7.5%
Something Else	27	2%
Don't Know	8	.1%
Refused	18	.1%
Total	15033	100.0%

Table F-8: Home Ownership (Unweighted)

Home Ownership	Count	Percent
Own/Mortgaged	11491	76.4%
Renter	3506	23.3%
Other	16	.1%
Don't Know	10	.1%
Refused	10	.1%
Total	15033	100.0%

Table F-9: Cell Phones in Household (Unweighted)

Cell Phones in Household	Count	Percent
0	1147	7.6%
1	4308	28.7%
2	5529	36.8%
3	2222	14.8%
4	1385	9.2%
5	335	2.2%
6	49	.3%
7	8	.1%
8	5	.0%
9	1	.0%
Don't Know	15	.1%
Refused	29	.2%
Total	15033	100.0%

Table F-10: Landlines in Household (Unweighted)

Landlines in Household	Count	Percent
0	101	.7%
1	13749	91.5%
2	932	6.2%
3	172	1.1%
4	36	.2%
5	12	.1%
6	5	.0%
8	2	.0%
10	1	.0%
Don't Know	8	.1%
Refused	15	.1%
Total	15033	100.0%

Table F-11: Fax Lines in Household (Unweighted)

Fax Lines in Household	Count	Percent
0	593	50.1%
1	555	46.9%
2	11	.9%
Don't Know	11	.9%
Refused	13	1.1%
Total	1183	100.0%

Table F-12: Household Income (Unweighted)

Household Income	Count	Percent
Less than $15 000	1481	9.9%
$15 000-$24 999	1054	7.0%
$25 000-$34 999	971	6.5%
$35 000-$49 999	1431	9.5%
$50 000-$74 999	2348	15.6%
$75 000-$99 999	2085	13.9%
$100 000-$149 999	2520	16.8%
$150 000 or more	2116	14.1%
Don't Know/Refused	1027	6.8%
Total	15033	100.0%

Table F-13: Trips Made by Household on Travel Day (Unweighted)

Trips Made by Household on Travel Day	Count	Percent
None	628	4 2%
1 to 5	4182	27 8%
6 to 10	4413	29.4%
11 to 15	2680	17 8%
16 to 20	1561	10.4%
21 to 30	1242	8 3%
31 to 50	313	2.1%
50+	14	.1%
Total	15033	100 0%

Table F-14: Household Students (Unweighted)

Household Students	Count	Percent
0	9376	62.4%
1	2593	17.2%
2	2082	13.8%
3	785	5.2%
4	162	1.1%
5	33	.2%
6	2	.0%
Total	15033	100.0%

Table F-15: Household Workers (Unweighted)

Household Workers	Count	Percent
0	3540	23.5%
1	5237	34.8%
2	5095	33.9%
3	917	6.1%
4	209	1.4%
5	32	.2%
6	3	.0%
Total	15033	100.0%

Table F-16: Licensed Drivers in Household (Unweighted)

Licensed Drivers in Household	Count	Percent
0	891	5.9%
1	4490	29.9%
2	7593	50.5%
3	1556	10.4%
4	429	2.9%
5	62	.4%
6	11	.1%
7	1	.0%
Total	15033	100.0%

Table F-17: Gender (Unweighted)

Respondent Gender	Count	Percent
Male	17727	47.9%
Female	19274	52.1%
Refused	22	.1%
Total	37023	100.0%

Table F-18: Age Distribution (Unweighted)

Age Distribution	Count	Percent
Younger than 20	9158	24.7%
20 to 34 years	3973	10.7%
35 to 54 years	11710	31.6%
55 to 64 years	7067	19.1%
65 years or older	4314	11.7%
Refused Age	801	2.2%
Total	37023	100.0%

Table F-19: Valid Driver's License (Unweighted)

Valid Driver's License	Count	Percent
Yes	26433	89.4%
No	3125	10.6%
Don't Know	12	0%
Refused	10	0%
Total	29580	100.0%

Table F-20: Respondent has Transit Pass (Unweighted)

Respondent has Transit Pass	Count	Percent
Yes	6588	22.3%
No	22872	77.3%
Don't Know	115	.4%
Refused	5	.0%
Total	29580	100.0%

Table F-21: Transit Pass Type, Multiple Response (Unweighted)

Transit Pass Type, Multiple Response	Count	Percent
Local Bus Pass	499	7.6%
Link Pass	597	9.0%
Inner Express Bus Pass	17	.3%
Outer Express Bus Pass	6	.1%
Commuter Rail Pass	583	8.8%
Ferry / Board Pass	21	.3%
Charlie Card	3849	58.3%
Other	849	12.9%
Don't Know	131	1.9%
Refused	48	.7%
Total	6600	100.0%

Table F-22: Worker Status, Computed (Unweighted)

Worker Status, Computed	Count	Percent
Yes	19177	64.8%
No	10403	35.2%
Total	29580	100.0%

Table F-23: Employment Status, Non-workers (Unweighted)

Employment Status, Non workers	Count	Percent
Retired	4243	40 8%
Disabled/On Disability Status	1495	14.4%
Homemaker	1376	13 2%
Unemployed but looking for work	1339	12.9%
Unemployed and not looking for work	249	2.4%
Student	1599	15.4%
Other	50	.5%
Refused	52	.5%
Total	10403	100 0%

Table F-24: Average Number of Jobs (Unweighted)

Jobs	Average
Average Number of Jobs	1.47

Table F-25: Hours Worked per Day (Unweighted)

Hours Worked per Day	Count	Percent
1	127	.7%
2	278	1.4%
3	427	2.2%
4	922	4.8%
5	912	4.8%
6	1146	6.0%
7	1161	6.1%
8	8249	43.0%
9	2168	11.3%
10	2348	12.2%
11	209	1.1%
12	677	3.5%
13	42	.2%
14	71	.4%
15	29	.2%
16	40	.2%
17	3	.0%
18	6	.0%
20	21	.1%
22	1	.0%
23	1	.0%
24	31	.2%
Don't Know	233	1.2%
Refused	75	.4%
Total	19177	100.0%

Table F-26: Days Worked Per Week (Unweighted)

Days Worked Per Week	Count	Percent
1	299	1.6%
2	664	3.5%
3	1390	7.2%
4	1815	9.5%
5	13245	69.1%
6	1236	6.4%
7	475	2.5%
Don't Know	39	.2%
Refused	14	.1%
Total	19177	100 0%

Table F-27: Typical Mode to Work (Unweighted)

Typical Mode to Work	Count	Percent
Works from home	1412	7.4%
Walk	735	3.8%
Bike	287	1.5%
Auto/Van/Truck Driver	13803	72.0%
Auto/Van/Truck Passenger	527	2.7%
Bus / Public Transit	1976	10.3%
Dial-A-Ride/Paratransit	20	.1%
Taxi	20	.1%
Motorcycle Driver	12	.1%
Motorcycle Passenger	1	.0%
Other	295	1.5%
Don't Know	51	.3%
Refused	38	.2%
Total	19177	100.0%

Table F-28: Worker Telecommutes (Unweighted)

Worker Telecommutes	Count	Percent
Yes	4665	24.3%
No	14191	74.0%
Don't Know	301	1.6%
Refused	20	.1%
Total	19177	100.0%

Table F-29: Flexible Work Program Offered at Work (Unweighted)

Flexible Work Program Offered at Work	Count	Percent
Yes	4733	24.7%
No	13486	70.3%
Don't Know	929	4.8%
Refused	29	2%
Total	19177	100.0%

Table F-30: Type of Flexible Work Programs Offered, Multiple Response (Unweighted)

Type of Flexible Work Programs Offered, Multiple Response	Count	Percent
9/80 Work Period	321	6.5%
Early Arrival/Departure	1678	33.9%
4/40 Work Week	372	7.5%
Flexible Hours	1111	22 5%
Other	784	15 8%
Don't Know	557	11 3%
Refused	125	2.5%
Total	4948	100 0%

Table F-31: Respondent Participates in Flexible Work Program (Unweighted)

Respondent Participates in Flexible Work Program	Count	Percent
Yes	3819	80.7%
No	797	16.8%
Don't Know	113	2.4%
Refused	4	.1%
Total	4733	100.0%

Table F-32: Disabled License Plate (Unweighted)

Disabled License Plate	Count	Percent
Yes	1712	4.9%
No	33116	94.7%
Don't Know	85	.2%
Refused	47	.1%
Total	34960	100.0%

Table F-33: Disabled Transit Registration (Unweighted)

Disabled Transit Registration	Count	Percent
Yes	924	2.6%
No	33917	97.0%
Don't Know	73	.2%
Refused	46	.1%
Total	34960	100.0%

Table F-34: Level of Education Completed (Unweighted)

Level of Education Completed	Count	Percent
Not a high school graduate 12th grade or less. (Includes very young children)	9640	26.0%
High school graduate (high school diploma or GED)	5513	14.9%
Some college credit but no degree	3107	8.4%
Associate or technical school degree	2451	6.6%
Bachelor's or undergraduate degree	7811	21.1%
Graduate Degree (includes professional degrees MD DDs JD)	8329	22.5%
Other	15	.0%
Don't Know	126	.3%
Refused	31	.1%
Total	37023	100.0%

Table F-35: School Enrollment Status (Unweighted)

School Enrollment Status	Count	Percent
Yes	9910	26.8%
No	27096	73.2%
Don't Know	14	.0%
Refused	3	.0%
Total	37023	100.0%

Table F-36: Full-time / Part-time Student Status (Unweighted)

Full-time / Part-time Student Status	Count	Percent
Part-time	1781	18 0%
Full-time	8124	82 0%
Don't Know	4	.0%
Refused	1	.0%
Total	9910	100 0%

Table F-37: Student Grade Level (Unweighted)

Student Grade Level	Count	Percent
Daycare	338	3.4%
Nursery School Preschool	574	5.8%
Kindergarten to Grade 8	4646	46.9%
Grade 9 to 12	2398	24.2%
Technical/Vocational School	127	1.3%
Two-year college (community college)	449	4.5%
4-year college or university	823	8.3%
Graduate School/Professional	516	5.2%
Other	10	.1%
Don't Know/Refused	29	.3%
Total	9910	100.0%

Table F-38: Typical Mode to School (Unweighted)

Typical Mode to School	Count	Percent
Home schooled	235	2.4%
Walk	1141	11 5%
Bike	114	1.2%
Auto/Van/Truck Driver	1348	13 6%
Auto/Van/Truck Passenger	3094	31 2%
Bus / Public Transit	582	5.9%
Dial-A-Ride/Paratransit	9	.1%
Taxi	3	.0%
School Bus	3152	31 8%
Motorcycle Driver	1	.0%
Other	130	1.3%
Don't Know	91	.9%
Refused	10	.1%
Total	9910	100 0%

Table F-39: Transit Trips Made in Past Week (Unweighted)

Transit Trips Made in Past Week	Count	Percent
0	27932	75.4%
1	682	1.8%
2	1909	5.2%
3	336	.9%
4	957	2.6%
5	494	1.3%
6	603	1.6%
7	147	.4%
8	488	1.3%
9	35	.1%
10	1747	4.7%
11	14	.0%
12	297	.8%
13	16	.0%
14	388	1.0%
15	87	.2%
16	76	.2%
17	6	.0%
18	32	.1%
19	3	.0%
20	157	.4%
21	12	.0%
22	8	.0%
23	6	.0%
24	16	.0%
25	32	.1%
26	3	.0%
28	28	.1%
30	53	.1%
32	3	.0%
34	1	.0%
35	2	.0%
40	13	.0%
42	7	.0%
45	1	.0%
48	1	.0%
50	6	.0%
52	1	.0%
56	1	.0%
58	1	.0%
60	3	.0%
70	1	.0%
75	1	.0%
87	1	.0%
Don't Know	391	1.1%
Refused	25	.1%
Total	37023	100 0%

Table F-40: Bike Facilities Available at Work/School (Unweighted)

Bike Facilities Available at Work/School	Count	Percent
Yes	11936	43.4%
No	11659	42.4%
Don't Know	3527	12 8%
Refused	365	1 3%
Total	27487	100 0%

Table F-41: Days Used Bike for Recreation in Past Week (Unweighted)

Days Used Bike for Recreation in Past Week	Count	Percent
0	17906	69.0%
1	1619	6.2%
2	1109	4.3%
3	564	2.2%
4	261	1.0%
5	191	.7%
6	57	.2%
7	157	.6%
Don't Know	2535	9.8%
Refused	1547	6.0%
Total	25946	100.0%

Table F-42: Days Used Bike for Transportation in Past Week (Unweighted)

Days Used Bike for Transportation in Past Week	Count	Percent
0	20269	78.1%
1	453	1.7%
2	361	1.4%
3	201	.8%
4	144	.6%
5	198	.8%
6	48	.2%
7	90	.3%
Don't Know	2623	10.1%
Refused	1559	6.0%
Total	25946	100.0%

Table F-43: Bike Lanes/Trails Used for Non-recreational Purposes (Unweighted)

Bike Lanes/Trails Used for Non-Recreational Purposes	Count	Percent
Off-Road	2754	10.6%
On-Road	6081	23.4%
Both	5911	22.8%
Don't Know	8742	33.7%
Refused	2458	9.5%
Total	25946	100.0%

Table F-44: Internet was used on Travel Day in Place of Trips (Unweighted)

Internet was used on Travel Day in Place of Trips	Count	Percent
Yes	2035	5.5%
No	32846	88.7%
Don't Know	2027	5.5%
Refused	115	.3%
Total	37023	100.0%

Table F-45: Reason for Non-Travel (Unweighted)

Reason for Non-Travel	Count	Percent
Personally Sick	623	14.5%
Caretaking Sick Kids	40	.9%
Caretaking Sick Other	39	.9%
Homebound Elderly or Disabled	551	12.9%
Worked at Home for Pay	294	6.9%
Worked Around Home (Not for Pay)	1263	29.5%
Out of Area	270	6.3%
Other	1204	28.1%
Total	4284	100 0%

Table F-46: Vehicle Year (Unweighted)

Vehicle Year	Count	Percent
1964 or older	72	3%
1965-1979	239	.9%
1980-1989	443	1.7%
1990-1999	4660	17 6%
2000-2003	6703	25 3%
2004-2006	6331	23.9%
2007	1998	7 5%
2008	1836	6.9%
2009	1548	5 8%
2010	1648	6 2%
2011	393	1 5%
Don't Know	554	2.1%
Refused	63	2%
Total	26488	100.0%

Table F-47: Vehicle Make (Unweighted)

Vehicle Make	Count	Percent
Acura	369	1.4%
Audi	284	1.1%
BMW	496	1.9%
Buick	471	1.8%
Cadillac	207	.8%
Chevrolet	1881	7.1%
Chrysler	549	2.1%
Dodge	1028	3.9%
Ford	2853	10.8%
Geo	35	.1%
GMC	396	1.5%
Harley Davidson	253	1.0%
Honda	3326	12.6%
Hummer	11	.0%
Hyundai	680	2.6%
Infiniti	138	.5%
Isuzu	43	.2%
Jaguar	38	.1%
Jeep	717	2.7%
Kawasaki	66	.2%
Kia	230	.9%
Lexus	391	1.5%
Lincoln	153	.6%
Mazda	502	1.9%
Mercedes	301	1.1%
Mercury	415	1.6%
Mitsubishi	130	.5%
Nissan	1124	4.2%
Oldsmobile	151	.6%
Plymouth	79	.3%
Pontiac	344	1.3%
Porsche	63	.2%
Range Rover	17	.1%
Saab	262	1.0%
Saturn	422	1.6%
Scion	66	.2%
Subaru	1139	4.3%
Suzuki	88	.3%
Toyota	4734	17.9%
Volkswagen	716	2.7%
Volvo	694	2.6%
Yamaha	82	.3%
Other	370	1.4%
Don't Know	130	.5%
Refused	44	.2%
Total	26488	100.0%

Table F-48: Vehicle Body Type (Unweighted)

Vehicle Body Type	Count	Percent
Car/Station Wagon	13747	51.9%
Van (any type)	2206	8.3%
SUV	6106	23.1%
Pickup Truck	2294	8.7%
Other type of truck	56	.2%
RV	38	.1%
Motorcycle	519	2.0%
Other	53	.2%
Refused	1469	5.5%
Total	26488	100.0%

Table F-49: Vehicle Fuel Type (Unweighted)

Vehicle Fuel Type	Count	Percent
Gas	25575	96.6%
Diesel	283	1.1%
Hybrid	515	1.9%
Flex Fuel	61	.2%
Other	13	.0%
Don't Know	17	.1%
Refused	24	.1%
Total	26488	100.0%

Appendix G: Retrieval Item Unweighted Frequencies

Table G-1: Primary Trip Purpose (Unweighted)

Primary Trip Purpose	Count	Percent
All other home activities	82383	43.3%
Changed type of transportation	18436	9.7%
Work/Job	15181	8.0%
Routine shopping (groceries clothing convenience store HH maintenance)	12933	6.8%
Eat meal outside of home	6247	3.3%
Attending Class	6156	3.2%
Drop off passenger from car	5601	2.9%
Visit friends/relatives	5449	2.9%
Indoor recreation/entertainment	4988	2.6%
Household errands (bank dry cleaning etc.)	4961	2.6%
Work Business Related	4942	2.6%
Pick up passenger from car	4822	2.5%
Personal business (visit government office attorney accountant)	4036	2.1%
Outdoor recreation/entertainment	3313	1.7%
Health care (doctor dentist)	3276	1.7%
Service private vehicle (gas oil lube etc.)	1786	.9%
Working at home (for pay)	1705	.9%
Civic/Religious activities	1261	.7%
Shopping for major purchases or specialty items (appliance electronics new vehicle major HH repairs)	942	.5%
All other School Activities	645	.3%
Looptrip	515	.3%
All other activities at work	456	.2%
Other	153	.1%
Volunteer Work/Activities	28	.0%
While Traveling -- Other	0	.0%

Table G-2: Transportation Mode of Trip (Unweighted)

Transportation Mode	Count	Percent
Walk	24511	16.0%
Bike	1679	1.1%
Auto/Van/Truck Driver	83766	54.7%
Auto/Van/Truck Passenger	28570	18.6%
Public Bus	3699	2.4%
Train	5286	3.5%
Ferry/boat	91	.1%
Dial-A-Ride/Paratransit	303	.2%
Taxi	401	.3%
School bus	4407	2.9%
Motorcycle Driver	97	.1%
Motorcycle Passenger	7	.0%
Other	382	.2%
Total	153199	100.0%

Table G-3: Total People Traveling in Travel Party (Including Respondent) (Unweighted)

Total People Traveling in Travel Party, Including Respondent	Count	Percent
1	90237	60.8%
2	35340	23.8%
3	14365	9.7%
4	5545	3.7%
5	2904	2.0%
Total	148391	100.0%

Table G-4: Parking Location (Unweighted)

Parking Location	Count	Percent
Parking Lot	50303	44.7%
Parking Garage	2275	2.0%
Street	9877	8.8%
Driveway/personal garage	38982	34.7%
Did not park	9684	8.6%
Other	263	.2%
Don't Know	908	.8%
Refused	148	.1%
Total	112440	100 0%

Table G-5: Paid to Park (Unweighted)

Paid to Park	Count	Percent
Did not Pay	100281	89.2%
Did Pay record amount	1841	1.6%
Don't Know	633	.6%
Refused	9685	8.6%
Total	112440	100.0%

Table G-6: How Parking Fare was Paid (Unweighted)

How Parking Fare was Paid	Count	Percent
Cash/Credit/Debit Card	1381	75.0%
Per-Paid parking Pass	345	18.7%
Employer-Provided Parking Pass	105	5.7%
Don't Know	1	.1%
Refused	9	.5%
Total	1841	100 0%

Table G-7: Toll Road Used on Trip (Unweighted)

Toll Road Used on Trip	Count	Percent
Yes	1851	1.6%
No	107885	95.9%
Don't Know	2554	2.3%
Refused	150	.1%
Total	112440	100.0%

Table G-8: Which Toll Road was Used (Unweighted)

Toll Road Used	Count	Percent
Turnpike	1606	86.8%
Ted Williams Tunnel	65	3.5%
Sumner Tunnel	68	3.7%
Tobin Tunnel	112	6.1%
Total	1851	100.0%

Table G-9: Average Household and Person Trip Rates (Unweighted)

Trip Rates	Average
Household Trips	10 2
Person Trips	4.1

Table G-10: Trip Rates by Household Size (Unweighted)

	Count	Mean
1	4123	4.71
2	4829	8.25
3	2538	12.16
4	2424	16.23
5	858	20.42
6	201	23.89
7	42	22.60
8 or More	18	25.78
Total	15033	10.19

Table G-11: Trip Rates by Number of Household Workers (Unweighted)

	Count	Mean
0	3540	6.1
1	5238	9.3
2	5095	12.6
3	916	15.0
4	209	18.3
5	32	22.0
6	3	18.3
Total	15033	10.2

Table G-12: Trip Rates by Household Income (Unweighted)

	Count	Mean
Less than $15 000	1481	6.6
$15 000-$24 999	1054	7.3
$25 000-$34 999	971	7.3
$35 000-$49 999	1431	8.4
$50 000-$74 999	2348	9.8
$75 000-$99 999	2085	11.1
$100 000-$149 999	2520	12.9
$150 000 or more	2116	13.4
Don't Know/Refused	1027	9.6
Total	15033	10.2

Table G-13: All Trip Modes (Unweighted)

	Count	Percent
Walk	24511	16.0
Bike	1679	1.1
Auto/Van/Truck Driver	83766	54.7
Auto/Van/Truck Passenger	28570	18.6
Public Bus	3699	2.4
Train	5286	3.5
Ferry/boat	91	.1
Dial-A-Ride/Paratransit	303	.2
Taxi	401	.3
School bus	4407	2.9
Motorcycle Driver	97	.1
Motorcycle Passenger	7	.0
Other SPECIFY	382	.2
Total	153199	100.0

Figure G-14: Trip Departure Times (Unweighted)

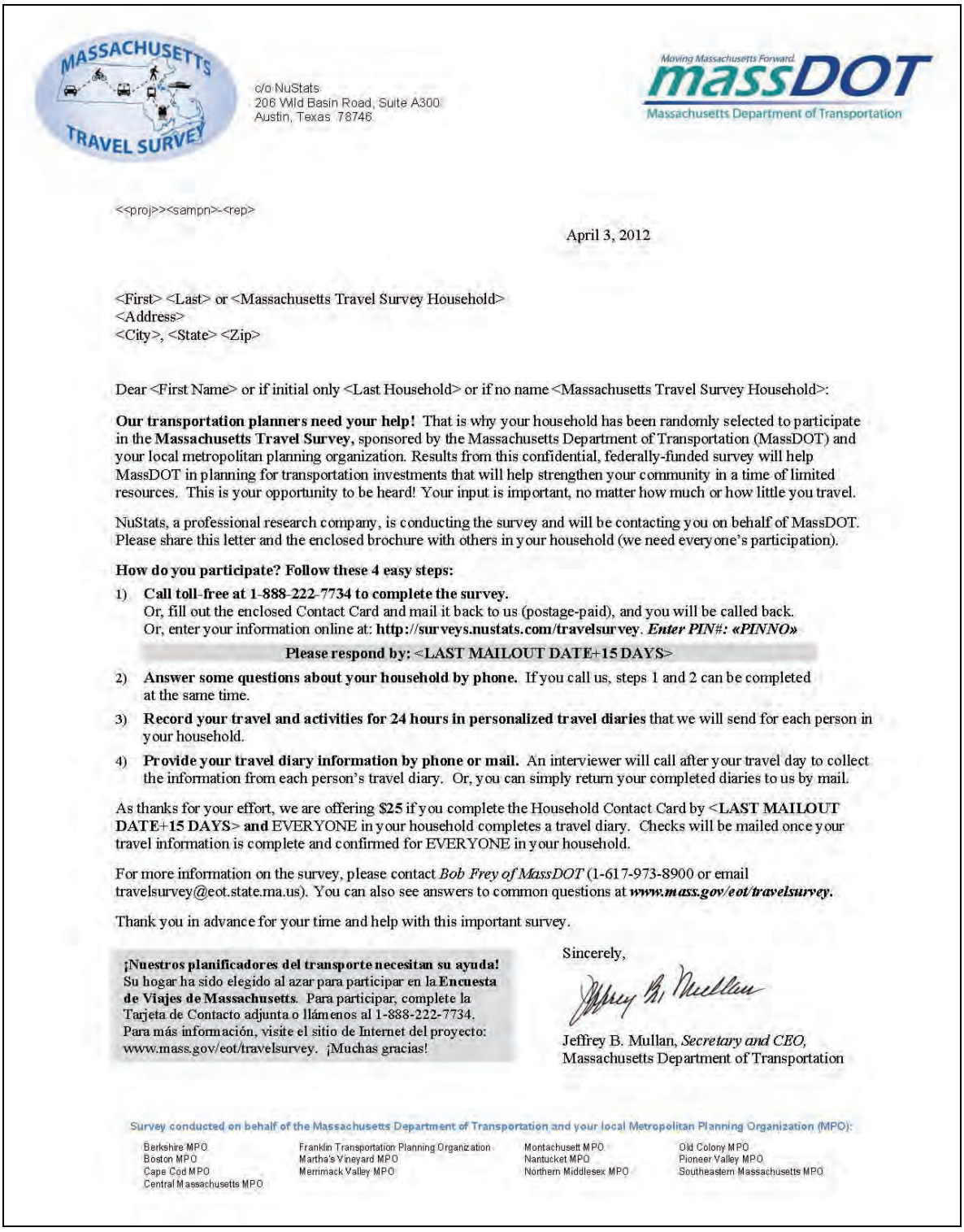
	Count	Percent
AM Peak	39630	25.9%
Mid-Day	45234	29 5%
PM Peak	49629	32.4%
Evening	15792	10 3%
Late Night / Early Morning	2914	1.9%
Total	153199	100 0%

Table G-15: Travel by Day of Week (Unweighted)

	Count	Percent
Monday	3040	20 2
Tuesday	3029	20.1
Wednesday	3005	20 0
Thursday	2919	19.4
Friday	3040	20 2
Total	15033	100.0

Appendix H: Survey Materials

Figure H1: Advance Letter (Non-GPS)



c/o NuStats
206 Wild Basin Road, Suite A300
Austin, Texas 78746

Moving Massachusetts Forward.
massDOT
Massachusetts Department of Transportation

<<proj>><sampn>-<rep>

April 3, 2012

<First> <Last> or <Massachusetts Travel Survey Household>
<Address>
<City>, <State> <Zip>

Dear <First Name> or if initial only <Last Household> or if no name <Massachusetts Travel Survey Household>:

Our transportation planners need your help! That is why your household has been randomly selected to participate in the **Massachusetts Travel Survey,** sponsored by the Massachusetts Department of Transportation (MassDOT) and your local metropolitan planning organization. Results from this confidential, federally-funded survey will help MassDOT in planning for transportation investments that will help strengthen your community in a time of limited resources. This is your opportunity to be heard! Your input is important, no matter how much or how little you travel.

NuStats, a professional research company, is conducting the survey and will be contacting you on behalf of MassDOT. Please share this letter and the enclosed brochure with others in your household (we need everyone's participation).

How do you participate? Follow these 4 easy steps:

1) **Call toll-free at 1-888-222-7734 to complete the survey.**
Or, fill out the enclosed Contact Card and mail it back to us (postage-paid), and you will be called back.
Or, enter your information online at: **http://surveys.nustats.com/travelsurvey**. ***Enter PIN#: «PINNO»***

Please respond by: <LAST MAILOUT DATE+15 DAYS>

2) **Answer some questions about your household by phone.** If you call us, steps 1 and 2 can be completed at the same time.

3) **Record your travel and activities for 24 hours in personalized travel diaries** that we will send for each person in your household.

4) **Provide your travel diary information by phone or mail.** An interviewer will call after your travel day to collect the information from each person's travel diary. Or, you can simply return your completed diaries to us by mail.

As thanks for your effort, we are offering **$25** if you complete the Household Contact Card by **<LAST MAILOUT DATE+15 DAYS> and** EVERYONE in your household completes a travel diary. Checks will be mailed once your travel information is complete and confirmed for EVERYONE in your household.

For more information on the survey, please contact *Bob Frey of MassDOT* (1-617-973-8900 or email travelsurvey@eot.state.ma.us). You can also see answers to common questions at ***www.mass.gov/eot/travelsurvey.***

Thank you in advance for your time and help with this important survey.

¡Nuestros planificadores del transporte necesitan su ayuda! Su hogar ha sido elegido al azar para participar en la **Encuesta de Viajes de Massachusetts**. Para participar, complete la Tarjeta de Contacto adjunta o llámenos al 1-888-222-7734. Para más información, visite el sitio de Internet del proyecto: www.mass.gov/eot/travelsurvey. ¡Muchas gracias!

Sincerely,

Jeffrey B. Mullan, *Secretary and CEO,*
Massachusetts Department of Transportation

Survey conducted on behalf of the Massachusetts Department of Transportation and your local Metropolitan Planning Organization (MPO):

Berkshire MPO
Boston MPO
Cape Cod MPO
Central Massachusetts MPO
Franklin Transportation Planning Organization
Martha's Vineyard MPO
Merrimack Valley MPO
Montachusett MPO
Nantucket MPO
Northern Middlesex MPO
Old Colony MPO
Pioneer Valley MPO
Southeastern Massachusetts MPO

Figure H2: Advance Brochure

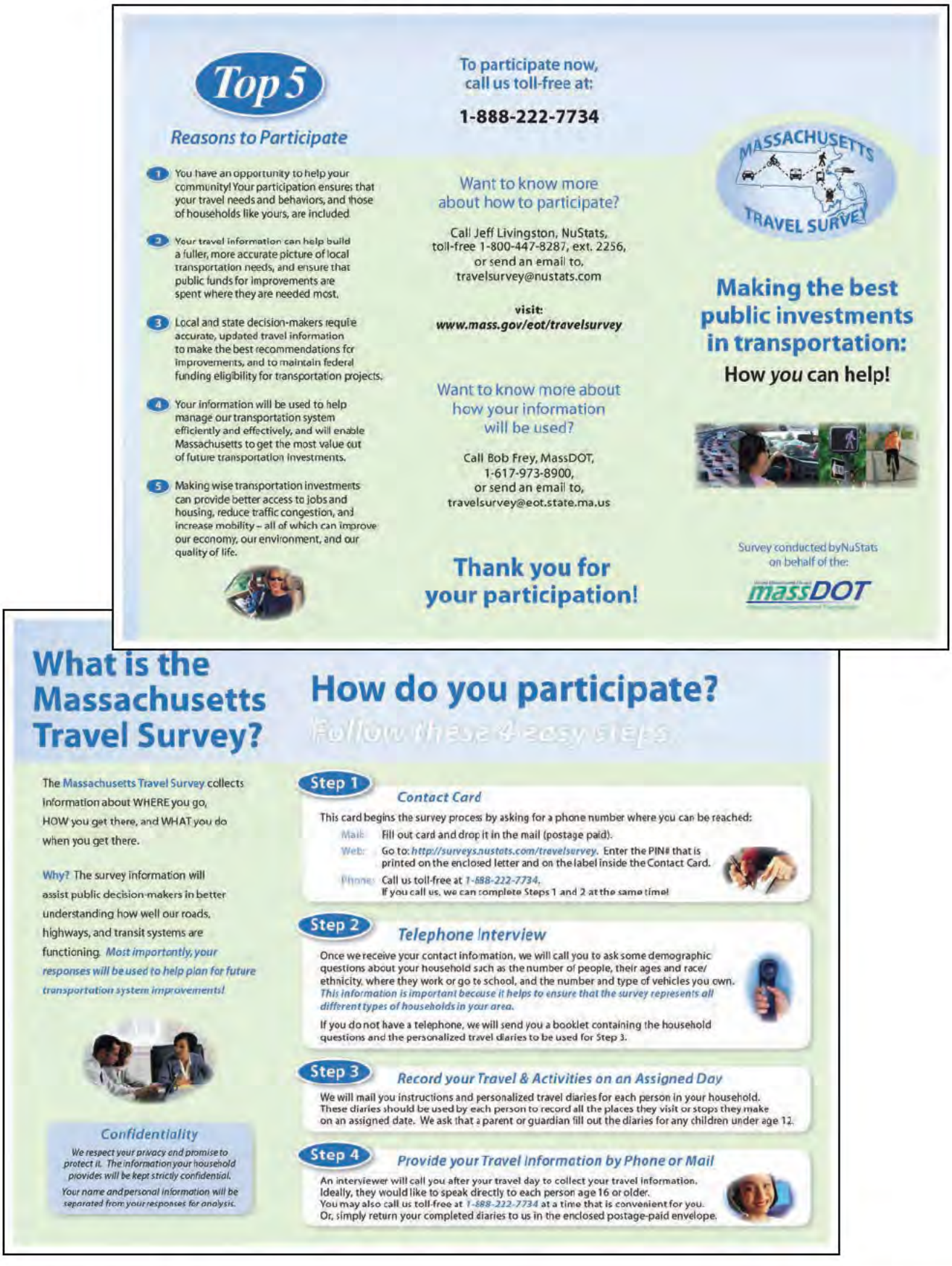

Top 5
Reasons to Participate
1 You have an opportunity to help your community! Your participation ensures that your travel needs and behaviors, and those of households like yours, are included.
2 Your travel information can help build a fuller, more accurate picture of local transportation needs, and ensure that public funds for improvements are spent where they are needed most.
3 Local and state decision-makers require accurate, updated travel information to make the best recommendations for improvements, and to maintain federal funding eligibility for transportation projects.
4 Your information will be used to help manage our transportation system efficiently and effectively, and will enable Massachusetts to get the most value out of future transportation investments.
5 Making wise transportation investments can provide better access to jobs and housing, reduce traffic congestion, and increase mobility – all of which can improve our economy, our environment, and our quality of life.
To participate now, call us toll-free at:
1-888-222-7734
Want to know more about how to participate?
Call Jeff Livingston, NuStats, toll-free 1-800-447-8287, ext. 2256, or send an email to, travelsurvey@nustats.com
visit:
www.mass.gov/eot/travelsurvey
Want to know more about how your information will be used?
Call Bob Frey, MassDOT, 1-617-973-8900, or send an email to, travelsurvey@eot.state.ma.us
Thank you for your participation!
MASSACHUSETTS TRAVEL SURVEY
Making the best public investments in transportation:
How you can help!
Survey conducted by NuStats on behalf of the:
massDOT
What is the Massachusetts Travel Survey?
The Massachusetts Travel Survey collects information about WHERE you go, HOW you get there, and WHAT you do when you get there.
Why? The survey information will assist public decision-makers in better understanding how well our roads, highways, and transit systems are functioning. Most importantly, your responses will be used to help plan for future transportation system improvements!
Confidentiality
We respect your privacy and promise to protect it. The information your household provides will be kept strictly confidential.
Your name and personal information will be separated from your responses for analysis.
How do you participate?
Follow these 4 easy steps
Step 1
Contact Card
This card begins the survey process by asking for a phone number where you can be reached:
Mail: Fill out card and drop it in the mail (postage paid).
Web: Go to: http://surveys.nustats.com/travelsurvey. Enter the PIN# that is printed on the enclosed letter and on the label inside the Contact Card.
Phone: Call us toll-free at 1-888-222-7734. If you call us, we can complete Steps 1 and 2 at the same time!
Step 2
Telephone Interview
Once we receive your contact information, we will call you to ask some demographic questions about your household such as the number of people, their ages and race/ethnicity, where they work or go to school, and the number and type of vehicles you own. This information is important because it helps to ensure that the survey represents all different types of households in your area.
If you do not have a telephone, we will send you a booklet containing the household questions and the personalized travel diaries to be used for Step 3.
Step 3
Record your Travel & Activities on an Assigned Day
We will mail you instructions and personalized travel diaries for each person in your household. These diaries should be used by each person to record all the places they visit or stops they make on an assigned date. We ask that a parent or guardian fill out the diaries for any children under age 12.
Step 4
Provide your Travel Information by Phone or Mail
An interviewer will call you after your travel day to collect your travel information. Ideally, they would like to speak directly to each person age 16 or older.
You may also call us toll-free at 1-888-222-7734 at a time that is convenient for you.
Or, simply return your completed diaries to us in the enclosed postage-paid envelope.

Figure H3: Contact Card

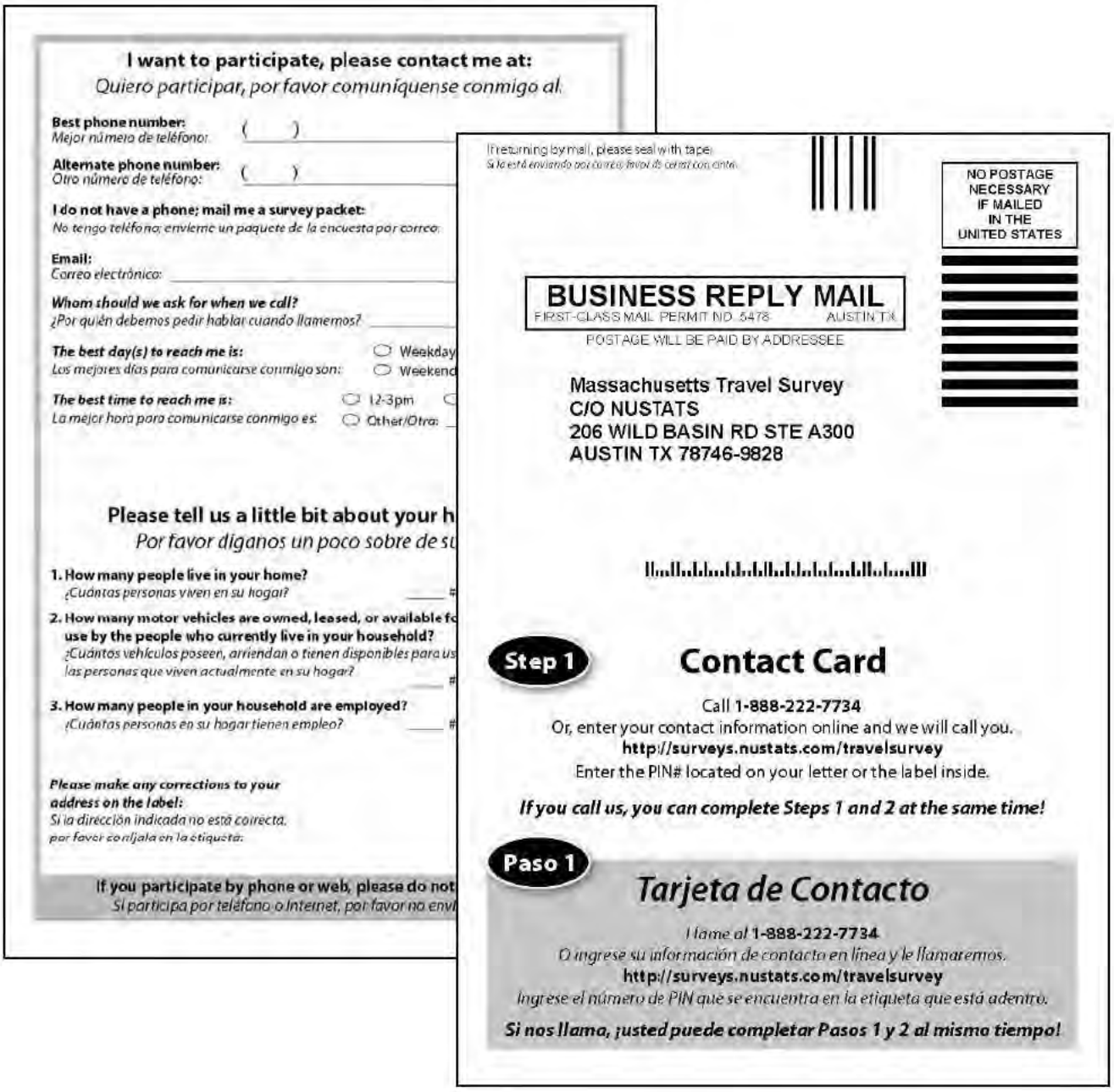
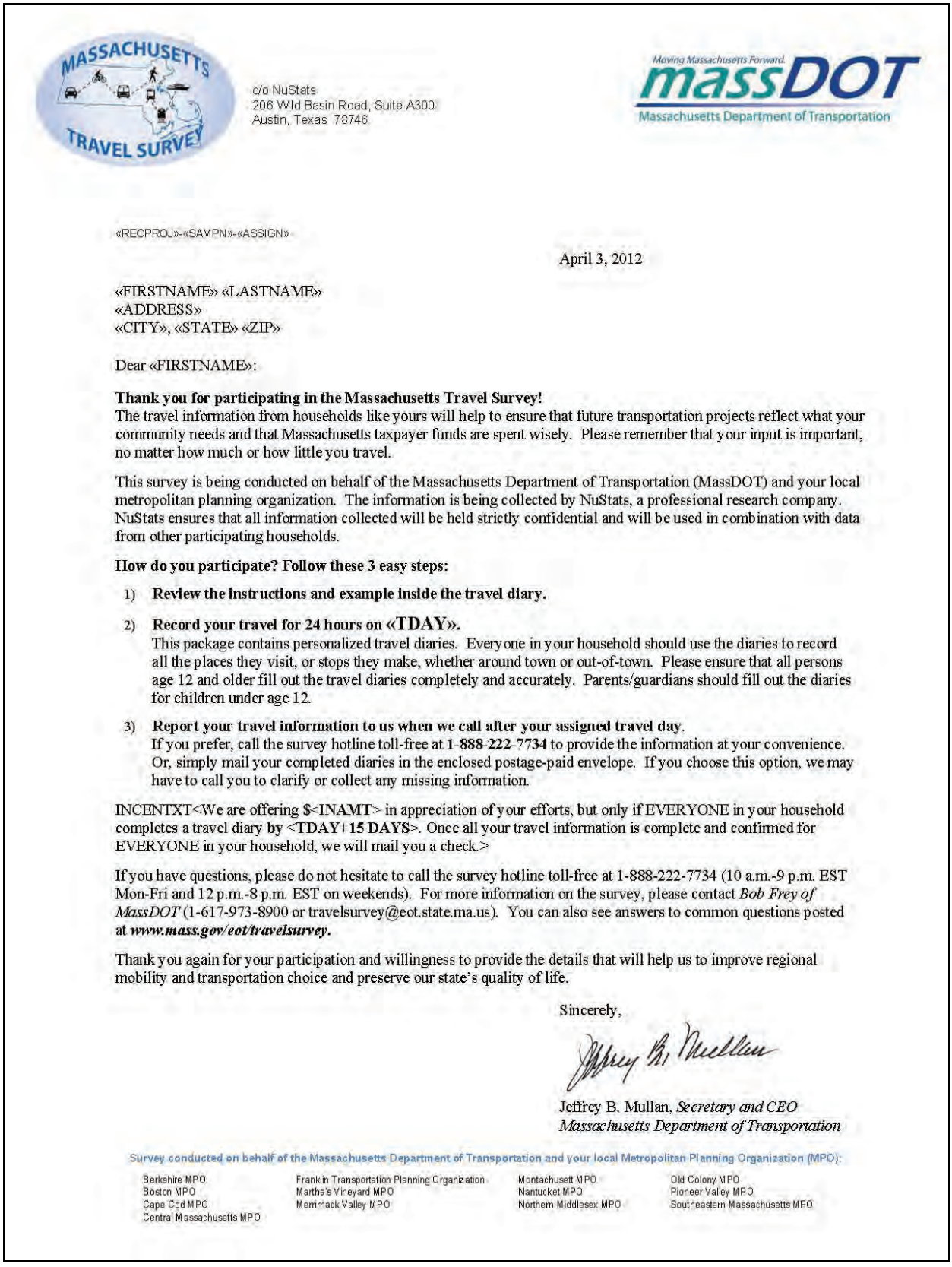

I want to participate, please contact me at:
Quiero participar, por favor comuníquense conmigo al:
Best phone number:
Mejor número de teléfono:
Alternate phone number:
Otro número de teléfono:
I do not have a phone; mail me a survey packet:
No tengo teléfono; envíeme un paquete de la encuesta por correo.
Email:
Correo electrónico:
Whom should we ask for when we call?
¿Por quién debemos pedir hablar cuando llamemos?
The best day(s) to reach me is:
Los mejores días para comunicarse conmigo son:
Weekday
Weekend
The best time to reach me is:
La mejor hora para comunicarse conmigo es:
12-3pm
Other/Otra:
Please tell us a little bit about your h
Por favor díganos un poco sobre de su
1. How many people live in your home?
¿Cuántas personas viven en su hogar?
2. How many motor vehicles are owned, leased, or available fo
use by the people who currently live in your household?
¿Cuántos vehículos poseen, arriendan o tienen disponibles para us
las personas que viven actualmente en su hogar?
3. How many people in your household are employed?
¿Cuántas personas en su hogar tienen empleo?
Please make any corrections to your address on the label:
Si la dirección indicada no está correcta,
por favor corríjala en la etiqueta:
If you participate by phone or web, please do not
Si participa por teléfono o Internet, por favor no envi
If returning by mail, please seal with tape.
Si lo está enviando por correo, favor de cerrar con cinta.
NO POSTAGE NECESSARY IF MAILED IN THE UNITED STATES
BUSINESS REPLY MAIL
FIRST-CLASS MAIL PERMIT NO. 5478 AUSTIN TX
POSTAGE WILL BE PAID BY ADDRESSEE
Massachusetts Travel Survey
C/O NUSTATS
206 WILD BASIN RD STE A300
AUSTIN TX 78746-9828
Step 1
Contact Card
Call 1-888-222-7734
Or, enter your contact information online and we will call you.
http://surveys.nustats.com/travelsurvey
Enter the PIN# located on your letter or the label inside.
If you call us, you can complete Steps 1 and 2 at the same time!
Paso 1
Tarjeta de Contacto
Llame al 1-888-222-7734
O ingrese su información de contacto en línea y le llamaremos.
http://surveys.nustats.com/travelsurvey
Ingrese el número de PIN que se encuentra en la etiqueta que está adentro.
Si nos llama, ¡usted puede completar Pasos 1 y 2 al mismo tiempo!

Figure H4: Diary Letter (Non-GPS)



c/o NuStats
206 Wild Basin Road, Suite A300
Austin, Texas 78746

Moving Massachusetts Forward.
massDOT
Massachusetts Department of Transportation

«RECPROJ»-«SAMPN»-«ASSIGN»

April 3, 2012

«FIRSTNAME» «LASTNAME»
«ADDRESS»
«CITY», «STATE» «ZIP»

Dear «FIRSTNAME»:

Thank you for participating in the Massachusetts Travel Survey!
The travel information from households like yours will help to ensure that future transportation projects reflect what your community needs and that Massachusetts taxpayer funds are spent wisely. Please remember that your input is important, no matter how much or how little you travel.

This survey is being conducted on behalf of the Massachusetts Department of Transportation (MassDOT) and your local metropolitan planning organization. The information is being collected by NuStats, a professional research company. NuStats ensures that all information collected will be held strictly confidential and will be used in combination with data from other participating households.

How do you participate? Follow these 3 easy steps:

1) **Review the instructions and example inside the travel diary.**

2) **Record your travel for 24 hours on «TDAY».**
This package contains personalized travel diaries. Everyone in your household should use the diaries to record all the places they visit, or stops they make, whether around town or out-of-town. Please ensure that all persons age 12 and older fill out the travel diaries completely and accurately. Parents/guardians should fill out the diaries for children under age 12.

3) **Report your travel information to us when we call after your assigned travel day**.
If you prefer, call the survey hotline toll-free at **1-888-222-7734** to provide the information at your convenience. Or, simply mail your completed diaries in the enclosed postage-paid envelope. If you choose this option, we may have to call you to clarify or collect any missing information.

INCENTXT<We are offering **$<INAMT>** in appreciation of your efforts, but only if EVERYONE in your household completes a travel diary **by <TDAY+15 DAYS>**. Once all your travel information is complete and confirmed for EVERYONE in your household, we will mail you a check.>

If you have questions, please do not hesitate to call the survey hotline toll-free at 1-888-222-7734 (10 a.m.-9 p.m. EST Mon-Fri and 12 p.m.-8 p.m. EST on weekends). For more information on the survey, please contact *Bob Frey of MassDOT* (1-617-973-8900 or travelsurvey@eot.state.ma.us). You can also see answers to common questions posted at ***www.mass.gov/eot/travelsurvey.***

Thank you again for your participation and willingness to provide the details that will help us to improve regional mobility and transportation choice and preserve our state's quality of life.

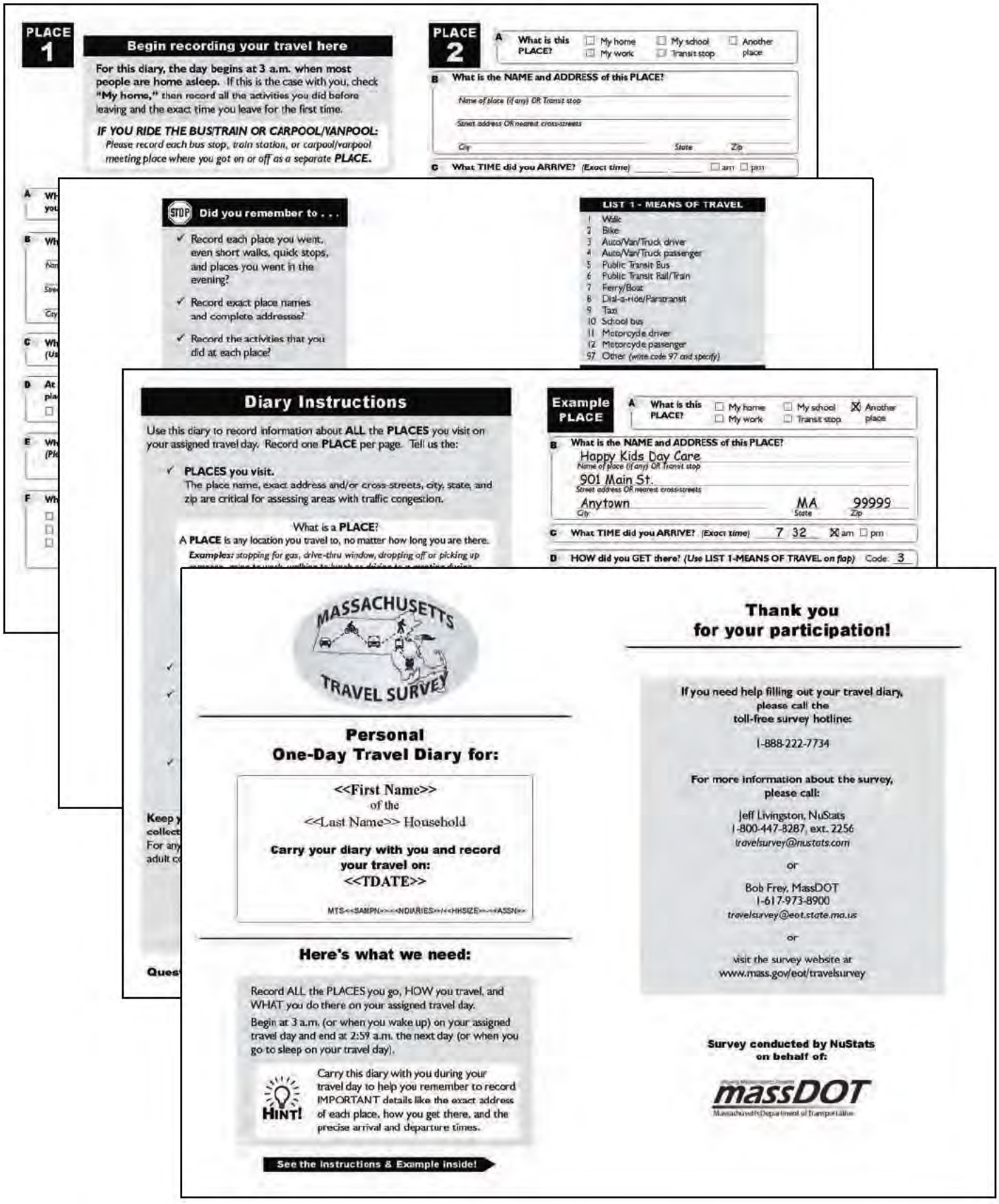
Sincerely,

Jeffrey B. Mullan, *Secretary and CEO*
Massachusetts Department of Transportation

Survey conducted on behalf of the Massachusetts Department of Transportation and your local Metropolitan Planning Organization (MPO):

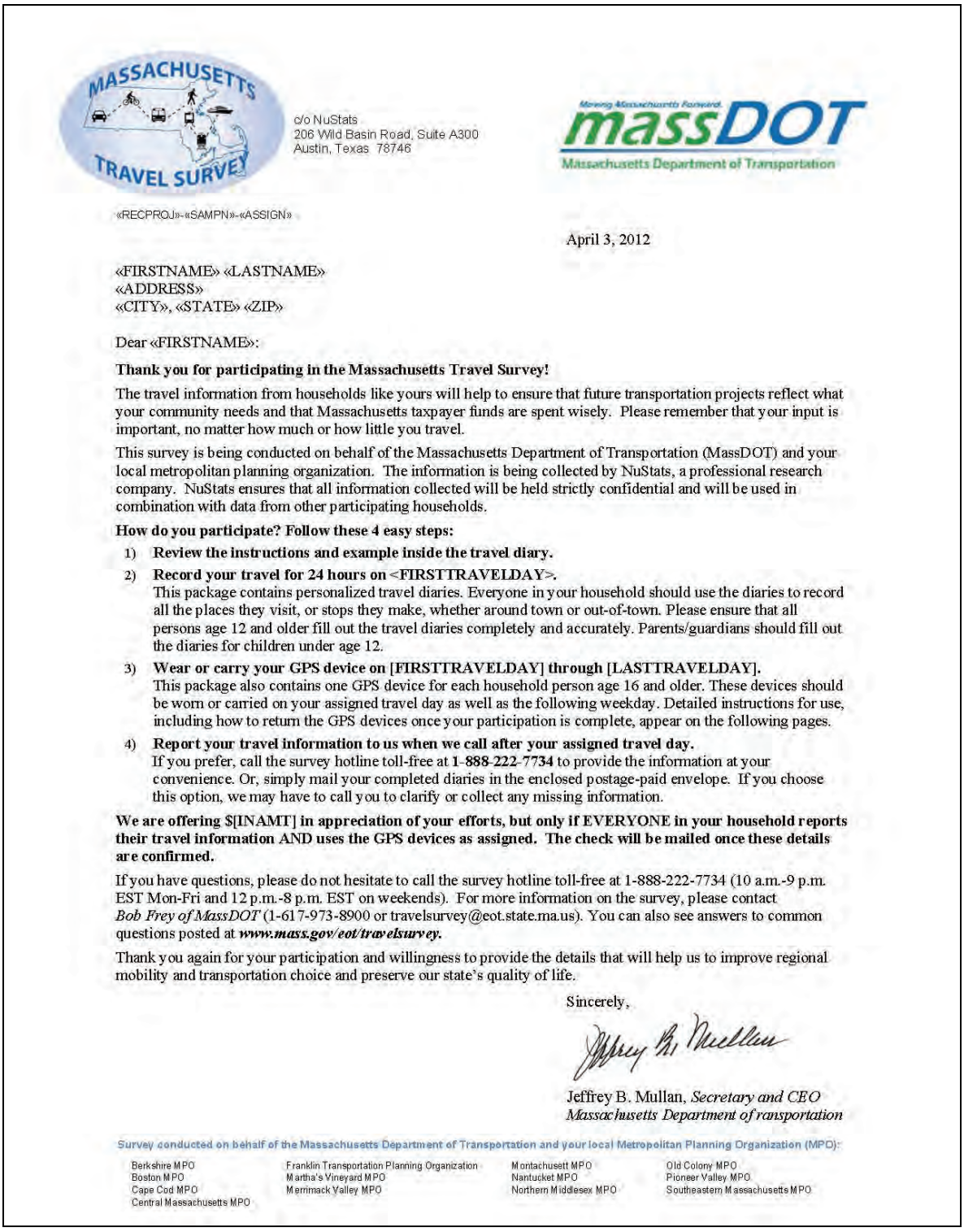
Berkshire MPO	Franklin Transportation Planning Organization	Montachusett MPO	Old Colony MPO
Boston MPO	Martha's Vineyard MPO	Nantucket MPO	Pioneer Valley MPO
Cape Cod MPO	Merrimack Valley MPO	Northern Middlesex MPO	Southeastern Massachusetts MPO
Central Massachusetts MPO			

Figure H5: Diary


PLACE 1
Begin recording your travel here
For this diary, the day begins at 3 a.m. when most people are home asleep. If this is the case with you, check "My home," then record all the activities you did before leaving and the exact time you leave for the first time.
IF YOU RIDE THE BUS/TRAIN OR CARPOOL/VANPOOL:
Please record each bus stop, train station, or carpool/vanpool meeting place where you got on or off as a separate PLACE.
PLACE 2
A What is this PLACE? My home My work My school Transit stop Another place
B What is the NAME and ADDRESS of this PLACE?
Name of place (if any) OR Transit stop
Street address OR nearest cross-streets
City State Zip
C What TIME did you ARRIVE? (Exact time) am pm
STOP Did you remember to . . .
✓ Record each place you went, even short walks, quick stops, and places you went in the evening?
✓ Record exact place names and complete addresses?
✓ Record the activities that you did at each place?
LIST 1 - MEANS OF TRAVEL
1 Walk
2 Bike
3 Auto/Van/Truck driver
4 Auto/Van/Truck passenger
5 Public Transit Bus
6 Public Transit Rail/Train
7 Ferry/Boat
8 Dial-a-ride/Paratransit
9 Taxi
10 School bus
11 Motorcycle driver
12 Motorcycle passenger
97 Other (write code 97 and specify)
Diary Instructions
Use this diary to record information about ALL the PLACES you visit on your assigned travel day. Record one PLACE per page. Tell us the:
✓ PLACES you visit.
The place name, exact address and/or cross-streets, city, state, and zip are critical for assessing areas with traffic congestion.
What is a PLACE?
A PLACE is any location you travel to, no matter how long you are there.
Examples: stopping for gas, drive-thru window, dropping off or picking up
Example PLACE
A What is this PLACE? My home My work My school Transit stop X Another place
B What is the NAME and ADDRESS of this PLACE?
Happy Kids Day Care
Name of place (if any) OR Transit stop
901 Main St.
Street address OR nearest cross-streets
Anytown MA 99999
City State Zip
C What TIME did you ARRIVE? (Exact time) 7 32 X am pm
D HOW did you GET there? (Use LIST 1-MEANS OF TRAVEL on flap) Code: 3
MASSACHUSETTS TRAVEL SURVEY
Personal One-Day Travel Diary for:
<<First Name>>
of the
<<Last Name>> Household
Carry your diary with you and record your travel on:
<<TDATE>>
MTS<<SAMPN>><<NDIARIES>>/<<HHSIZE>><<ASSN>>
Here's what we need:
Record ALL the PLACES you go, HOW you travel, and WHAT you do there on your assigned travel day.
Begin at 3 a.m. (or when you wake up) on your assigned travel day and end at 2:59 a.m. the next day (or when you go to sleep on your travel day).
HINT!
Carry this diary with you during your travel day to help you remember to record IMPORTANT details like the exact address of each place, how you get there, and the precise arrival and departure times.
See the instructions & Example inside!
Thank you for your participation!
If you need help filling out your travel diary, please call the toll-free survey hotline:
1-888-222-7734
For more information about the survey, please call:
Jeff Livingston, NuStats
1-800-447-8287, ext. 2256
travelsurvey@nustats.com
or
Bob Frey, MassDOT
1-617-973-8900
travelsurvey@eot.state.ma.us
or
visit the survey website at
www.mass.gov/eot/travelsurvey
Survey conducted by NuStats on behalf of:
massDOT
Massachusetts Department of Transportation

Appendix I: GPS Materials

Figure I1: Diary Letter (GPS)



c/o NuStats
206 Wild Basin Road, Suite A300
Austin, Texas 78746

«RECPROJ»-«SAMPN»-«ASSIGN»

April 3, 2012

«FIRSTNAME» «LASTNAME»
«ADDRESS»
«CITY», «STATE» «ZIP»

Dear «FIRSTNAME»:

Thank you for participating in the Massachusetts Travel Survey!

The travel information from households like yours will help to ensure that future transportation projects reflect what your community needs and that Massachusetts taxpayer funds are spent wisely. Please remember that your input is important, no matter how much or how little you travel.

This survey is being conducted on behalf of the Massachusetts Department of Transportation (MassDOT) and your local metropolitan planning organization. The information is being collected by NuStats, a professional research company. NuStats ensures that all information collected will be held strictly confidential and will be used in combination with data from other participating households.

How do you participate? Follow these 4 easy steps:

1) **Review the instructions and example inside the travel diary.**
2) **Record your travel for 24 hours on <FIRSTTRAVELDAY>.**
   This package contains personalized travel diaries. Everyone in your household should use the diaries to record all the places they visit, or stops they make, whether around town or out-of-town. Please ensure that all persons age 12 and older fill out the travel diaries completely and accurately. Parents/guardians should fill out the diaries for children under age 12.
3) **Wear or carry your GPS device on [FIRSTTRAVELDAY] through [LASTTRAVELDAY].**
   This package also contains one GPS device for each household person age 16 and older. These devices should be worn or carried on your assigned travel day as well as the following weekday. Detailed instructions for use, including how to return the GPS devices once your participation is complete, appear on the following pages.
4) **Report your travel information to us when we call after your assigned travel day.**
   If you prefer, call the survey hotline toll-free at **1-888-222-7734** to provide the information at your convenience. Or, simply mail your completed diaries in the enclosed postage-paid envelope. If you choose this option, we may have to call you to clarify or collect any missing information.

We are offering $[INAMT] in appreciation of your efforts, but only if EVERYONE in your household reports their travel information AND uses the GPS devices as assigned. The check will be mailed once these details are confirmed.

If you have questions, please do not hesitate to call the survey hotline toll-free at 1-888-222-7734 (10 a.m.-9 p.m. EST Mon-Fri and 12 p.m.-8 p.m. EST on weekends). For more information on the survey, please contact *Bob Frey of MassDOT* (1-617-973-8900 or travelsurvey@eot.state.ma.us). You can also see answers to common questions posted at ***www.mass.gov/eot/travelsurvey.***

Thank you again for your participation and willingness to provide the details that will help us to improve regional mobility and transportation choice and preserve our state's quality of life.

Sincerely,

Jeffrey B. Mullan, *Secretary and CEO*
Massachusetts Department of Transportation

Survey conducted on behalf of the Massachusetts Department of Transportation and your local Metropolitan Planning Organization (MPO):

Berkshire MPO
Boston MPO
Cape Cod MPO
Central Massachusetts MPO
Franklin Transportation Planning Organization
Martha's Vineyard MPO
Merrimack Valley MPO
Montachusett MPO
Nantucket MPO
Northern Middlesex MPO
Old Colony MPO
Pioneer Valley MPO
Southeastern Massachusetts MPO

Figure I2: GPS Device Instructions

GPS Device Instructions

[SAMPN]

This package contains one GPS logging device for each person of age 16 or older in your household. Here are pictures of the GPS device to be used in this study.

GPS device clipped to Belt on Waist

GPS Device Assignment

Person	Name	Age	GPS Unit ID	Color Code
[PERSON1]	[NAME1]	[AGE1]	[GPSUNITID1]	
[PERSON2]	[NAME2]	[AGE2]	[GPSUNITID2]	
[PERSON3]	[NAME3]	[AGE3]	[GPSUNITID3]	
[PERSON4]	[NAME4]	[AGE4]	[GPSUNITID4]	
[PERSON5]	[NAME5]	[AGE5]	[GPSUNITID5]	
[PERSON6]	[NAME6]	[AGE6]	[GPSUNITID6]	
[PERSON7]	[NAME7]	[AGE7]	[GPSUNITID7]	
[PERSON8]	[NAME8]	[AGE8]	[GPSUNITID8]	

The GPS devices should be provided to each person as shown in the table above. The GPS Unit ID appears on the back of each GPS logger. The name of each person and a unique color sticker has also been placed on each GPS device. Here is a summary of your schedule for this study:

Travel Diary Date: [TravelDiaryDate] (Day on which your paper travel diary is filled out).
GPS Device Dates: [FirstTravelDay] through [LastTravelDay]

When and How to Wear

- You should wear the GPS device whenever you travel out of your home starting on your assigned travel date (this is also the day that you are recording your travel in the travel diary) and continuing through the GPS study period. If your Travel Diary Day is a Monday, Tuesday, Wednesday, or Thursday, you should wear the device for two consecutive days. If your Travel Diary Day is on Friday, you should wear the device on four consecutive days (Friday through Monday). Please remember that you will need to recharge the unit each night throughout the duration of the study.
- When walking, biking or riding public transportation, you should wear the GPS device on your waist or clipped to your bag or purse. If you are riding inside a vehicle such as a car or truck, you can continue to wear the GPS device on your waist or place your bag or purse on the seat.

Charge the GPS Device Battery Daily/Nightly, including on the Night before your Travel Diary Date ([DAYBEFORETRAVELDATE])

- Plug one end of the enclosed cable (the larger end) into the cable on the side of the GPS. Connect the opposite end (smaller end) of the charger into the wall plug adaptor and plug the adapter into the wall. If the connection is right, the bottom light on the GPS device will light up in amber/yellow indicating that it is charging. The light will be red in the morning when the unit is fully charged.
- Unplug the GPS device in the morning and make sure the green light (top light nearest the power button) is illuminated. If it is not, turn the device off by holding the power button for three to five seconds. All of the lights should turn off. Then press and hold the power button for three to five seconds again to turn the device back on. The green light should now be illuminated, meaning the device is ready to collect data. The green light will flash when data is being collected.

If you have any questions regarding the GPS equipment, please call
GeoStats toll-free at **1-866-436-7828** between 8:30 AM and 5:30 PM (ET).
GeoStats is our contractor for the GPS component of the Massachusetts Travel Survey.

Survey conducted on behalf of the Massachusetts Department of Transportation and your local Metropolitan Planning Organization (MPO):

Berkshire MPO
Boston MPO
Cape Cod MPO
Central Massachusetts MPO
Franklin Transportation Planning Organization
Martha's Vineyard MPO
Merrimack Valley MPO
Montachusett MPO
Nantucket MPO
Northern Middlesex MPO
Old Colony MPO
Pioneer Valley MPO
Southeastern Massachusetts MPO

GPS Device Return

[SAMPN]

Return the GPS Devices immediately after your participation is complete.

As soon as possible after [LastTravelDay], collect all GPS devices, cables, and AC adapters provided for your household, place them in the packaging material and box in which they arrived, and place the box inside the pre-paid FedEx Pak (and seal the Pak). You may drop the FedEx package at any FedEx store/drop box, or you can call 1-800-GoFedEx for a pick-up at your home.

Please DO NOT RETURN your travel diaries with your GPS equipment. You will need the diaries to report your travel by phone or by mail (using the return envelope provided).

If you have any questions regarding the GPS equipment, please call
GeoStats toll-free at **1-866-436-7828** between 8:30 AM and 5:30 PM (ET).
GeoStats is our contractor for the GPS component of the Massachusetts Travel Survey.

Please complete this table and return this page with your equipment in the box and FedEx Pak provided.

Person	Name	Used Equipment (Yes/No)	Reason if GPS device not used
[PERSON1]	[NAME1]		
[PERSON2]	[NAME2]		
[PERSON3]	[NAME3]		
[PERSON4]	[NAME4]		
[PERSON5]	[NAME5]		
[PERSON6]	[NAME6]		
[PERSON7]	[NAME7]		
[PERSON8]	[NAME8]		

Please provide any additional comments here:

Return Checklist

- All GPS Devices, power cables, and AC adapters
- Packing materials/Original Box
- This page

Remember, in order to receive your $[INAMT] participation award, you must:

- Use the enclosed travel diaries and report your travel details by phone or mail.
- Use the enclosed GPS devices and return them via FedEx. To return the equipment, place the box with the equipment inside the pre-paid FedEx Pak (and seal the Pak). You may drop the FedEx package at any FedEx store/drop box, or you can call 1-800-GoFedEx for a pick-up at your home.

Thanks for your participation!

Survey conducted on behalf of the Massachusetts Department of Transportation and your local Metropolitan Planning Organization (MPO):

Berkshire MPO
Boston MPO
Cape Cod MPO
Central Massachusetts MPO
Franklin Transportation Planning Organization
Martha's Vineyard MPO
Merrimack Valley MPO
Montachusett MPO
Nantucket MPO
Northern Middlesex MPO
Old Colony MPO
Pioneer Valley MPO
Southeastern Massachusetts MPO

Figure I3: GPS Return Reminder Letter

GeoStats

MASSACHUSETTS TRAVEL SURVEY

Moving Massachusetts Forward massDOT

Date

Jane Doe
123 Main Street
Boston, MA 02130

Dear Jane:

Thank you for your participation in the Wearable GPS portion of the Massachusetts Travel Survey conducted on behalf of the Massachusetts Department of Transportation (MassDOT) and your local metropolitan planning organization (MPO).

Our records indicate that we have not received your GPS device and we need your help to get the unit(s) back. Please return the equipment in the box in which it was sent, using the per-paid FedEx envelope provided in the box. If you need a replacement envelope, please give us a call at 1-866-GeoStats (1-866-436-7828) so we can arrange to have one sent to you. If you have already returned the GPS device, we would greatly appreciate your calling us anyway to let us know.

Thanks again for your participation. We hope you will consider being a part of future MassDOT/MPO studies.

Sincerely,

Jean Wolf
President
GeoStats

HHID: 7000002

Figure I4: GPS Incentive Letter

GeoStats

MASSACHUSETTS TRAVEL SURVEY

Moving Massachusetts Forward. massDOT

Date

Jane Doe
123 Main Street
Boston, MA 02130

Dear Jane:

Thank you for your participation in the Wearable GPS portion of the Massachusetts Travel Survey conducted on behalf of the Massachusetts Department of Transportation (MassDOT) and your local metropolitan planning organization (MPO). Enclosed is a $25 participation gift for your assistance with this important study.

Your participation will help us build a more accurate picture of transportation needs, and enable Massachusetts and your region to get the most value out of future transportation investments. We hope you will consider being a part of future MassDOT/MPO studies.

Sincerely,

Jean Wolf
President
GeoStats

Appendix J: Survey Results by MPO

Survey Results for Boston MPO (MAPC)

Household Characteristics

MAPC-1: Household Size (Weighted) – HHSIZ

Household Size	Count	Percent
1	349141	29.0%
2	386500	32.1%
3	191528	15.9%
4	188279	15.6%
5	69387	5.8%
6	15710	1.3%
7	2451	0.2%
8 or More	1945	0.2%
Total	1204940	100.0%

MAPC-2: Transit Used on Regular Basis (Weighted) –RIBUS

Transit Used on Regular Basis	Count	Percent
Yes	506895	42.1%
No	697405	57.9%
Don't Know	640	0.1%
Total	1204940	100.0%

MAPC-3: Household Bicycles (Weighted) – HHBIC

Household Bicycles	Count	Percent
0	523710	43.5%
1	195862	16.3%
2	216283	17.9%
3	104657	8.7%
4	92841	7.7%
5	39110	3.2%
6	17981	1.5%
7	5713	0.5%
8	8023	0.7%
Don't Know	761	0.1%
Total	1204940	100.0%

MAPC-4: Household Number of Vehicles (Weighted)-HHVEH

Household Vehicles	Count	Percent
0	177382	14.7%
1	452213	37.5%
2	432769	35.9%
3	104801	8.7%
4	26128	2.2%
5	8699	0.7%
6	1763	0.1%
7	778	0.1%
8 or More	406	0.0%
Total	1204940	100.0%

MAPC-5: Household Ethnicity (Weighted)-RACE

Household Ethnicity	Count	Percent
White Alone	1005889	83.5%
Black or African American Alone	78612	6.5%
American Indian or Alaskan Native Alone	3409	0.3%
Asian Alone	32756	2.7%
Native Hawaiian, Pacific Islander Alone	1426	0.1%
Some Other Race Alone	45612	3.8%
Two or More Races	26522	2.2%
Refused	10715	0.9%
Total	1204940	100.0%

MAPC-6: Hispanic or Latino Households (Weighted) – HISP

Hispanic or Latino Household	Count	Percent
Yes	56945	4.7%
No	1141224	94.7%
Refused	6770	0.6%
Total	1204940	100.0%

MAPC-7: Household Residence Type (Weighted)-RESTY

Household Residence Type	Count	Percent
Single Family Detached Dwelling	690238	57.3%
Building with 2-4 Units	261809	21.7%
Building with 5-19 Units	114005	9.5%
Building with 20 or More Units	133569	11.1%
Or Something Else?	2999	0.2%
Don't Know	717	0.1%
Refused	1603	0.1%
Total	1204940	100.0%

MAPC-8: Ownership of Household Residence (Weighted) – OWN

Home Ownership	Count	Percent
Own/Mortgaged	871886	72.4%
Renter	330477	27.4%
Other, Specify	1040	0.1%
DK	492	0.0%
RF	1045	0.1%
Total	1204940	100.0%

MAPC-9: Cell phone lines in Household (Weighted) – CPLNS

Cell Phones in Household	Count	Percent
0	93517	7.8%
1	362362	30.1%
2	437461	36.3%
3	171952	14.3%
4	104816	8.7%
5	27419	2.3%
6	3254	0.3%
7	816	0.1%
8	504	0.0%
9	107	0.0%
Don't Know	647	0.1%
Refused	2085	0.2%
Total	1204940	100.0%

MAPC-10: Landlines in Household (Weighted)-PHLNS

Landlines in Household	Count	Percent
0	11539	1.0%
1	1097767	91.1%
2	74935	6.2%
3	14344	1.2%
4	3238	0.3%
5	665	0.1%
6	452	0.0%
7	0	0%
8	208	0.0%
Don't Know	449	0.0%
Refused	1343	0.1%
Total	1204940	100.0%

MAPC-11: Fax Lines in Household (Weighted) – FXLNS

Fax Lines in Household	Count	Percent
0	47055	49.2%
1	45941	48.0%
2	966	1.0%
Don't Know	502	0.5%
Refused	1170	1.2%
Total	95634	100.0%

MAPC-12: Household Income (Weighted) – INCOME

Household Income	Count	Percent
Less than $15,000	118903	9.9%
$15,000-$24,999	81988	6.8%
$25,000-$34,999	75527	6.3%
$35,000-$49,999	119662	9.9%
$50,000-$74,999	187558	15.6%
$75,000-$99,999	166267	13.8%
$100,000-$149,999	157951	13.1%
$150,000 or more	233162	19.4%
Don't Know/Refused	63921	5.3%
Total	1204940	100.0%

MAPC-13: Trips Made by Household on Travel Day (Weighted) – HTRIPS

Trips Made by Household on Travel Day	Count	Percent
None	46717	3.9%
1 to 5	301623	25.0%
6 to 10	343588	28.5%
11 to 15	223775	18.6%
16 to 20	136804	11.4%
21 to 30	117166	9.7%
31 to 50	33598	2.8%
50+	1668	0.1%
Total	1204940	100.0%

MAPC-14: Household Students (Weighted) – HHSTU

Household Students	Count	Percent
0	753912	62.6%
1	209505	17.4%
2	163150	13.5%
3	61699	5.1%
4	14646	1.2%
5	2028	0.2%
Total	1204940	100.0%

MAPC-15: Household Workers (Weighted) – HHWRK

Household Workers	Count	Percent
0	264900	22.0%
1	452660	37.6%
2	390170	32.4%
3	77434	6.4%
4	17028	1.4%
5	2605	0.2%
6	143	0.0%
Total	1204940	100.0%

MAPC-16: Licensed Drivers in Household (Weighted) –HHLIC

Licensed Drivers in Household	Count	Percent
0	90908	7.5%
1	384420	31.9%
2	588339	48.8%
3	109061	9.1%
4	27176	2.3%
5	4047	0.3%
6	846	0.1%
7	143	0.0%
Total	1204940	100.0%

MAPC-17: Distribution of Households by Day of Week of Travel (Weighted) – DAY

Day of Week of Travel	Count	Percent
Monday	243125	20.2%
Tuesday	244378	20.3%
Wednesday	247709	20.6%
Thursday	231925	19.2%
Friday	237804	19.7%
Total	1204940	100.0%

Person Characteristics

MAPC-18: Respondent Gender (Weighted) – GEND

Respondent Gender	Count	Percent
Male	1477187	47.0%
Female	1664427	52.9%
Refused	2120	0.1%
Total	3143734	100.0%

MAPC-19: Age Distribution (Weighted) –AGE

Age Distribution	Count	Percent
Younger than 20	773833	24.6%
20 to 34 years	646398	20.6%
35 to 54 years	914468	29.1%
55 to 64 years	357317	11.4%
65 years or older	391130	12.4%
Refused Age	60588	1.9%
Total	3143734	100.0%

MAPC-20: Valid Driver's License (Weighted)- LIC

Valid Driver's License	Count	Percent
Yes	2121883	84.7%
No	377399	15.1%
Don't Know	3557	0.1%
Refused	1108	0.0%
Total	2503948	100.0%

MAPC-21: Respondent has Transit Pass (Weighted) – TRANS

Respondent has Transit Pass	Count	Percent
Yes	1015720	40.6%
No	1472812	58.8%
Don't Know	15041	0.6%
Refused	375	0.0%
Total	2503948	100.0%

MAPC-22: Transit Pass Type (Weighted)-PASST1, PASST2, PASST3

Transit Pass Type, Multiple Response	Count	Percent
Local Bus Pass	62870	6.2%
Link Pass	122799	12.1%
Inner Express Bus Pass	3038	0.3%
Outer Express Bus Pass	632	0.1%
Commuter Rail Pass	69231	6.8%
Ferry / Board Pass	2655	0.3%
Charlie Card	614405	60.4%
Other, specify	116293	11.4%
Don't Know	19411	1.9%
Refused	6453	0.6%
Total	1017786	100.0%

MAPC-23: Worker Status, Computed (Weighted) – WORKS

Worker Status, Computed	Count	Percent
Yes	1653661	66.0%
No	850287	34.0%
Total	2503948	100.0%

MAPC-24: Employment Status, Non-workers (Weighted) – WKSTAT

Employment Status, Non workers	Count	Percent
Retired	309947	36.5%
Disabled/On Disability Status	107493	12.6%
Homemaker	125567	14.8%
Unemployed but looking for work	116358	13.7%
Unemployed and not looking for work	26833	3.2%
Student	153738	18.1%
Other, SPECIFY	5498	0.6%
Refused	4853	0.6%
Total	850287	100.0%

MAPC-25: Average Number of Jobs (Weighted)-JOBS

Jobs	Average
Average Number of Jobs	1.48

MAPC-26: Hours Worked per Day (Weighted) - HOURS

Hours Worked per Day	Count	Percent
1	14222	0.9%
2	24909	1.5%
3	43244	2.6%
4	79814	4.8%
5	83133	5.0%
6	93988	5.7%
7	97292	5.9%
8	715589	43.3%
9	180713	10.9%
10	197368	11.9%
11	18860	1.1%
12	53510	3.2%
13	3059	0.2%
14	6385	0.4%
15	1652	0.1%
16	3727	0.2%
17	255	0.0%
18	367	0.0%
20	2209	0.1%
22	81	0.0%
23	137	0.0%
24	2565	0.2%
Don't Know	23642	1.4%
Refused	6938	0.4%
Total	1653661	100.0%

MAPC-27: Respondent Average Number of Days Worked Per Week (Weighted) – WDAYS

Days Worked Per Week	Count	Percent
1	27584	1.7%
2	57591	3.5%
3	119225	7.2%
4	155129	9.4%
5	1149053	69.5%
6	104117	6.3%
7	36344	2.2%
Don't Know	3602	0.2%
Refused	1016	0.1%
Total	1653661	100.0%

MAPC-28: Telecommute Status (Weighted) - TELEW

Worker Telecommutes	Count	Percent
Yes	429126	26.0%
No	1192611	72.1%
Don't Know	29853	1.8%
Refused	2071	0.1%
Total	1653661	100.0%

MAPC-29: Flexible Work Program Offered at Work (Weighted) – SCHED

Flexible Work Program Offered at Work	Count	Percent
Yes	417709	25.3%
No	1136339	68.7%
Don't Know	97301	5.9%
Refused	2313	0.1%
Total	1653661	100.0%

MAPC-30: Type of Flexible Work Programs Offered, Multiple Response (Weighted)- FLEXP1, FLEXP2, FLEXP3

Type of Flexible Work Programs Offered, Multiple Response	Count	Percent
9/80 Work Period	28444	6.5%
Early Arrival/Departure	144958	33.1%
4/40 Work Week	37616	8.6%
Flexible Hours	93208	21.3%
Other, Specify	70163	16.0%
Don't Know	52937	12.1%
Refused	10196	2.3%
Total	437522	100.0%

MAPC-31: Respondent Participates in Flexible Work Program (Weighted)-FLEXT

Respondent Participates in Flexible Work Program	Count	Percent
Yes	333558	79.9%
No	73547	17.6%
Don't Know	9986	2.4%
Refused	618	0.1%
Total	417709	100.0%

MAPC-32: Disabled License Plate (Weighted)- EDISA

Disabled License Plate	Count	Percent
Yes	122252	4.1%
No	2815000	95.2%
Don't Know	13982	0.5%
Refused	4396	0.1%
Total	2955629	100.0%

MAPC-33: Disabled Transit Registration (Weighted) –EDIS2

Disabled Transit Registration	Count	Percent
Yes	96516	3.3%
No	2844363	96.2%
Don't Know	10518	0.4%
Refused	4233	0.1%
Total	2955629	100.0%

MAPC-34: Level of Education Completed (Weighted) –EDUCA

Level of Education Completed	Count	Percent
Not a high school graduate, 12th grade or less. (Includes very young children)	825172	26.2%
High school graduate (high school diploma or GED)	418747	13.3%
Some college credit but no degree	259362	8.3%
Associate or technical school degree	154274	4.9%
Bachelor's or undergraduate degree	676227	21.5%
Graduate Degree (includes professional degrees, MD, DDs, JD)	792631	25.2%
Other, SPECIFY	1669	0.1%
Don't Know	12506	0.4%
Refused	3146	0.1%
Total	3143734	100.0%

MAPC-35: School Enrollment Status (Weighted)-ENROL

School Enrollment Status	Count	Percent
Yes	914385	29.1%
No	2227346	70.9%
Don't Know	1723	0.1%
Refused	279	0.0%
Total	3143734	100.0%

MAPC-36: Full-time / Part-time Student Status (Weighted)-FPTIM

Full-time / Part-time Student Status	Count	Percent
Part-time	175699	19.2%
Full-time	738252	80.7%
Don't Know	434	0.0%
Total	914385	100.0%

MAPC-37: Student Grade Level Attends (Weighted)-SCHOL

Student Grade Level	Count	Percent
Daycare	32733	3.6%
Nursery School, Preschool	56951	6.2%
Kindergarten to Grade 8	388003	42.4%
Grade 9 to 12	192908	21.1%
Technical/Vocational School	17875	2.0%
Two-year college (community college)	44675	4.9%
4-year college or university	106643	11.7%
Graduate School/Professional	69354	7.6%
Other, SPECIFY	1301	0.1%
Don't Know/Refused	3941	0.4%
Total	914385	100.0%

MAPC-38: Transit Trips Made in Past Week (Weighted)- TTRIP

Transit Trips Made in Past Week	Count	Percent
0	1932222	61.5%
1	73265	2.3%
2	240942	7.7%
3	48632	1.5%
4	140019	4.5%
5	65821	2.1%
6	83091	2.6%
7	16285	0.5%
8	67877	2.2%
9	4492	0.1%
10	230288	7.3%
11	2353	0.1%
12	46367	1.5%
13	2392	0.1%
14	60515	1.9%
15	13217	0.4%
16	13717	0.4%
17	767	0.0%
18	4504	0.1%
19	215	0.0%
20	22161	0.7%
21	1568	0.0%
22	1255	0.0%
23	1032	0.0%
24	2252	0.1%
25	3757	0.1%
26	698	0.0%
28	4734	0.2%
30	7504	0.2%

Transit Trips Made in Past Week	Count	Percent
32	403	0.0%
35	274	0.0%
40	2220	0.1%
42	1169	0.0%
45	84	0.0%
48	156	0.0%
50	441	0.0%
56	170	0.0%
60	375	0.0%
70	282	0.0%
Don't Know	43710	1.4%
Refused	2506	0.1%
Total	3143734	100.0%

MAPC-39: Bike Facilities Available at Work/School (Weighted)- BIKFA

Bike Facilities Available at Work/School	Count	Percent
Yes	1079571	45.2%
No	945508	39.6%
Don't Know	326179	13.7%
Refused	36558	1.5%
Total	2387816	100.0%

MAPC-40: Days Used Bike for Recreation in Past Week (Weighted)- BIKD1

Days Used Bike for Recreation in Past Week	Count	Percent
0	1410361	67.9%
1	133193	6.4%
2	89832	4.3%
3	44780	2.2%
4	23165	1.1%
5	17476	0.8%
6	4210	0.2%
7	11514	0.6%
Don't Know	208193	10.0%
Refused	134365	6.5%
Total	2077089	100.0%

MAPC-41: Days Used Bike for Transportation in Past Week (Weighted) – BIKD2

Days Used Bike for Transportation in Past Week	Count	Percent
0	1561471	75.2%
1	44603	2.1%
2	36583	1.8%
3	23038	1.1%
4	19168	0.9%
5	24813	1.2%
6	7021	0.3%
7	10342	0.5%
Don't Know	213783	10.3%
Refused	136266	6.6%
Total	2077089	100.0%

MAPC-42: Bike Lanes/Trails Used (Weighted) – BIKRD

Bike Lanes/Trails Used for Non-Recreational Purposes	Count	Percent
Off-Road	182739	8.8%
On-Road	485604	23.4%
Both	469654	22.6%
Don't Know	731949	35.2%
Refused	207143	10.0%
Total	2077089	100.0%

MAPC-43: Internet was Used on Travel Day in Place of Trips (Weighted)-INUSE

Internet was used on Travel Day in Place of Trips	Count	Percent
Yes	176116	5.6%
No	2784871	88.6%
Don't Know	174580	5.6%
Refused	8168	0.3%
Total	3143734	100.0%

MAPC-44: Reason for Non-Travel (Weighted)-NOGO

Reason for Non-Travel	Count	Percent
Personally Sick	55439	15.3%
Caretaking Sick Kids	4867	1.3%
Caretaking Sick Other	3329	0.9%
Homebound Elderly or Disabled	47915	13.3%
Worked at Home for Pay	25910	7.2%
Worked Around Home (Not for Pay)	106133	29.4%
Out of Area	25663	7.1%
Other, SPECIFY	92306	25.5%
Total	361562	100.0%

Vehicle Characteristics

MAPC-45: Vehicle Year (Weighted) – YEAR

Vehicle Year	Count	Percent
1964 or older	3917	0.2%
1965-1979	9364	0.5%
1980-1989	21804	1.2%
1990-1999	299294	17.0%
2000-2003	461522	26.2%
2004-2006	431545	24.5%
2007	140237	8.0%
2008	131084	7.4%
2009	114126	6.5%
2010	121243	6.9%
2011	27715	1.6%
Total	1761851	100.0%

MAPC-46: Vehicle Make (Weighted) – MAKE

Vehicle Make	Count	Percent
Acura	35789	2.0%
Audi	26731	1.5%
BMW	40543	2.3%
Buick	29414	1.6%
Cadillac	13107	0.7%
Chevrolet	90068	5.0%
Chrysler	33945	1.9%
Dodge	49341	2.7%
Ford	166556	9.3%
Geo	2301	0.1%
GMC	18153	1.0%
Harley Davidson	9068	0.5%
Honda	257472	14.3%
Hummer	495	0.0%
Hyundai	35695	2.0%
Infiniti	12780	0.7%
Isuzu	1811	0.1%
Jaguar	2202	0.1%
Jeep	41113	2.3%
Kawasaki	2844	0.2%
Kia	16647	0.9%
Lexus	34999	1.9%
Lincoln	10111	0.6%
Mazda	36166	2.0%
Mercedes	25261	1.4%
Mercury	30788	1.7%
Mitsubishi	8126	0.5%

Nissan	74033	4.1%
Oldsmobile	10068	0.6%
Plymouth	3642	0.2%
Pontiac	16563	0.9%
Porsche	5200	0.3%
Range Rover	1096	0.1%
Saab	21961	1.2%
Saturn	23240	1.3%
Scion	4371	0.2%
Subaru	86066	4.8%
Suzuki	3330	0.2%
Toyota	366379	20.4%
Volkswagen	59641	3.3%
Volvo	57347	3.2%
Yamaha	3087	0.2%
Other, SPECIFY	21280	1.2%
Don't Know	8632	0.5%
Refused	1976	0.1%
Total	1799438	100.0%

MAPC-47: Vehicle Body Type (Weighted) – BODY

Vehicle Body Type	Count	Percent
Car/Station Wagon	1015224	56.4%
Van (any type)	153835	8.5%
SUV	410176	22.8%
Pickup Truck	100073	5.6%
Other type of truck	2848	0.2%
RV	921	0.1%
Motorcycle	19787	1.1%
Other, Specify	2835	0.2%
Refused	93739	5.2%
Total	1799438	100.0%

MAPC-48: Vehicle Fuel Type (Weighted) - FUEL

Vehicle Fuel Type	Count	Percent
Gas	1731796	96.2%
Diesel	13973	0.8%
Hybrid	45791	2.5%
Flex Fuel	3855	0.2%
Other, SPECIFY	787	0.0%
Don't Know	1756	0.1%
Refused	1481	0.1%
Total	1799438	100.0%

Place Characteristics

MAPC-49: Primary Trip Purpose (Weighted) – TPURP

Primary Trip Purpose	Count	Percent
All other home activities	6946775	40.1%
Changed type of transportation	3065459	17.7%
Work/Job	1289874	7.4%
Routine shopping (groceries, clothing, convenience store, HH maintenance)	1002045	5.8%
Attending Class	554895	3.2%
Eat meal outside of home	512016	3.0%
Drop off passenger from car	494374	2.9%
Indoor recreation/entertainment	446244	2.6%
Pick up passenger from car	426682	2.5%
Visit friends/relatives	409548	2.4%
Household errands (bank, dry cleaning, etc.)	364110	2.1%
Work Business Related	358816	2.1%
Personal business (visit government office, attorney, accountant)	330032	1.9%
Outdoor recreation/entertainment	270037	1.6%
Health care (doctor, dentist)	257955	1.5%
Working at home (for pay)	154664	0.9%
Service private vehicle (gas, oil lube, etc.)	119633	0.7%
Civic/Religious activities	91289	0.5%
Shopping for major purchases or specialty items (appliance, electronics, new vehicle, major HH repairs)	72401	0.4%
All other School Activities	58792	0.3%
Loop trip	43614	0.3%
All other activities at work	41964	0.2%
Other, SPECIFY	12092	0.1%
Volunteer Work/Activities	1867	0.0%
While Traveling -- Other, Specify	0	0.0%
Total	17325180	100.0%

MAPC-50: Total People Traveling in Travel Party, Including Respondent (Weighted) – TOTTR

Total People Traveling	Count	Percent
1 person	8663304	62.5%
2 persons	3138518	22.7%
3 persons	1311326	9.5%
4 persons	487544	3.5%
5 persons	252506	1.8%
Total	13853198	100.0%

MAPC-51: Parking Location (Weighted) – PRKTY

Parking Location	Count	Percent
Parking Lot	3415338	41.6%
Parking Garage	223537	2.7%
Street	974128	11.9%
Driveway/personal garage	2678454	32.6%
Did not park	830343	10.1%
Other, SPECIFY	13267	0.2%
Don't Know	71240	0.9%
Refused	11610	0.1%
Total	8217916	100.0%

MAPC-52: Paid to Park (Weighted) – PRKCS

Paid to Park	Count	Percent
Did not Pay	7143155	86.9%
Did Pay, record amount	188468	2.3%
Don't Know	54585	0.7%
Refused	831709	10.1%
Total	8217916	100.0%

MAPC-53: How Parking Fare was Paid (Weighted) – PRKHW

How Parking Fare was Paid	Count	Percent
Cash/Credit/Debit Card	138697	73.6%
Per-Paid parking Pass	37149	19.7%
Employer-Provided Parking Pass	11679	6.2%
Refused	943	0.5%
Total	188468	100.0%

MAPC-54: Toll Road Used on Trip (Weighted) – TOLL (Use a Toll road)?

Use a Toll Road	Count	Percent
Yes	176660	2.1%
No	7871875	95.8%
Don't Know	158392	1.9%
Refused	10990	0.1%
Total	8217916	100.0%

MAPC-55: Toll Road Used (Weighted) – TOLLT (Which Toll road was used)?

Which Toll Road was Used	Count	Percent
Turnpike	143972	81.5%
Ted Williams Tunnel	7645	4.3%
Sumner Tunnel	9956	5.6%
Tobin Tunnel	15087	8.5%
Total	176660	100.0%

Travel Behavior

MAPC-56: Average Household and Person Trip Rates (Weighted)

	Average Trip Rate
Household	10.6
Person	4.1

MAPC-57: Trip Rates by Household Size (Weighted)

Household Size	Trip Rate
1	4.5
2	8.3
3	13.6
4	17.5
5	22.2
6	26.6
7	24.8
8 or more	29.8
Total	10.6

MAPC-58: Trip Rates by Number of Household Workers (Weighted)

Household Workers	Trip Rate
0	6.6
1	9.7
2	13.1
3	16.8
4	22.0
5	27.2
6	22.7
Total	10.6

MAPC-59: Trip Rates by Household Income (Weighted)

Household Income	Trip Rate
Less than $15,000	8.3
$15,000-$24,999	9.2
$25,000-$34,999	8.4
$35,000-$49,999	9.4
$50,000-$74,999	10.2
$75,000-$99,999	11.4
$100,000-$149,999	13.2
$150,000 or more	13.3
Don't Know/Refused	9.8
Total	10.6

MAPC-60: All Trip Modes (Weighted)

Transportation Mode	Count	Percent
Walk	3726746	26.3%
Bike	209057	1.5%
Auto/Van/Truck Driver	5897416	41.6%
Auto/Van/Truck Passenger	2315815	16.3%
Public Bus	678513	4.8%
Train	927518	6.5%
Ferry/boat	8805	0.1%
Dial-A-Ride/Paratransit	38940	0.3%
Taxi	35406	0.2%
School bus	293585	2.1%
Motorcycle Driver	4685	0.0%
Other, SPECIFY	45703	0.3%
Total	14182189	100.0%

MAPC-61: Mode to Work (Weighted)

Mode to Work	Count	Percent
Works from home	123715	7.5%
Walk	104994	6.3%
Bike	45443	2.7%
Auto/Van/Truck Driver	941943	57.0%
Auto/Van/Truck Passenger	47594	2.9%
Bus / Public Transit	342148	20.7%
Dial-A-Ride/Paratransit	2135	0.1%
Taxi	2562	0.2%
Motorcycle Driver	798	0.0%
Motorcycle Passenger	181	0.0%
Other, SPECIFY	33314	2.0%
Don't Know	5992	0.4%
Refused	2841	0.2%
Total	1653661	100.0%

MAPC-62: Mode to School (Weighted)

Mode to School	Count	Percent
Home schooled	20116	2.2%
Walk	146757	16.0%
Bike	14458	1.6%
Auto/Van/Truck Driver	104114	11.4%
Auto/Van/Truck Passenger	266017	29.1%
Bus / Public Transit	129829	14.2%
Dial-A-Ride/Paratransit	666	0.1%
Taxi	749	0.1%
School Bus	205044	22.4%
Motorcycle Driver	216	0.0%
Other, SPECIFY	15154	1.7%
Don't Know	10156	1.1%
Refused	1111	0.1%
Total	914385	100.0%

Survey Results for Southeastern Massachusetts MPO (SRPEDD)

Household Characteristics

SRPEDD-1: Household Size (Weighted) – HHSIZ

Household Size	Count	Percent
1	79639	33.9%
2	68018	28.9%
3	38960	16.6%
4	32344	13.8%
5	12303	5.2%
6	2669	1.1%
7	727	0.3%
8 or More	349	0.1%
Total	235009	100.0%

SRPEDD-2: Transit Used on Regular Basis (Weighted) –RIBUS

Transit Used on Regular Basis	Count	Percent
Yes	40914	17.4%
No	194095	82.6%
Total	235009	100.0%

SRPEDD-3: Household Bicycles (Weighted) – HHBIC

Household Bicycles	Count	Percent
0	110812	47.2%
1	41004	17.4%
2	38054	16.2%
3	18473	7.9%
4	16527	7.0%
5	5699	2.4%
6	2509	1.1%
7	575	0.2%
8	1014	0.4%
Don't Know	341	0.1%
Total	235009	100.0%

SRPEDD-4: Household Number of Vehicles (Weighted)-HHVEH

Household Vehicles	Count	Percent
0	30415	12.9%
1	82530	35.1%
2	76822	32.7%
3	28803	12.3%
4	12494	5.3%
5	3379	1.4%
6	397	0.2%
7	0	0%
8 or More	169	0.1%
Total	235009	100.0%

SRPEDD-5: Household Ethnicity (Weighted)-RACE

Household Ethnicity	Count	Percent
White Alone	209816	89.3%
Black or African American Alone	6572	2.8%
American Indian or Alaskan Native Alone	522	0.2%
Asian Alone	1102	0.5%
Some Other Race Alone	10193	4.3%
Two or More Races	4279	1.8%
Refused	2525	1.1%
Total	235009	100.0%

SRPEDD-6: Hispanic or Latino Households (Weighted) – HISP

Hispanic or Latino Household	Count	Percent
Yes	11088	4.7%
No	222512	94.7%
Refused	1409	0.6%
Total	235009	100.0%

SRPEDD-7: Household Residence Type (Weighted)-RESTY

Household Residence Type	Count	Percent
Single Family Detached Dwelling	146746	62.4%
Building with 2-4 Units	52027	22.1%
Building with 5-19 Units	24470	10.4%
Building with 20 or More Units	11564	4.9%
or Something Else?	201	0.1%
Total	235009	100.0%

SRPEDD-8: Ownership of Household Residence (Weighted) – OWN

Home Ownership	Count	Percent
Own/Mortgaged	157113	66.9%
Renter	77712	33.1%
Other, Specify	183	0.1%
Total	235009	100.0%

SRPEDD-9: Cell phone lines in Household (Weighted) – CPLNS

Cell Phones in Household	Count	Percent
0	26490	11.3%
1	78639	33.5%
2	76805	32.7%
3	33176	14.1%
4	15302	6.5%
5	3492	1.5%
6	629	0.3%
7	0	0.0%
8	234	0.1%
Refused	243	0.1%
Total	235009	100.0%

SRPEDD-10: Landlines in Household (Weighted)-PHLNS

Landlines in Household	Count	Percent
0	3499	1.5%
1	218771	93.1%
2	9893	4.2%
3	1578	0.7%
4	516	0.2%
5	98	0.0%
6	186	0.1%
Don't Know	225	0.1%
Refused	243	0.1%
Total	235009	100.0%

SRPEDD-11: Fax Lines in Household (Weighted) – FXLNS

Fax Lines in Household	Count	Percent
0	6722	52.8%
1	5603	44.0%
Don't Know	170	1.3%
Refused	243	1.9%
Total	12739	100.0%

SRPEDD-12: Household Income (Weighted) – INCOME

Household Income	Count	Percent
Less than $15,000	38575	16.4%
$15,000-$24,999	30369	12.9%
$25,000-$34,999	23532	10.0%
$35,000-$49,999	34340	14.6%
$50,000-$74,999	35717	15.2%
$75,000-$99,999	28594	12.2%
$100,000-$149,999	20309	8.6%
$150,000 or more	15456	6.6%
Don't Know/Refused	8117	3.5%
Total	235009	100.0%

SRPEDD-13: Trips Made by Household on Travel Day (Weighted) – HTRIPS

Trips Made by Household on Travel Day	Count	Percent
None	14161	6.0%
1 to 5	79742	33.9%
6 to 10	73347	31.2%
11 to 15	34474	14.7%
16 to 20	17788	7.6%
21 to 30	12790	5.4%
31 to 50	2707	1.2%
Total	235009	100.0%

SRPEDD-14: Household Students (Weighted) – HHSTU

Household Students	Count	Percent
0	151186	64.3%
1	40644	17.3%
2	30711	13.1%
3	10473	4.5%
4	1303	0.6%
5	692	0.3%
Total	235009	100.0%

SRPEDD-15: Household Workers (Weighted) – HHWRK

Household Workers	Count	Percent
0	76615	32.6%
1	83074	35.3%
2	58409	24.9%
3	13801	5.9%
4	3109	1.3%
Total	235009	100.0%

SRPEDD-16: Licensed Drivers in Household (Weighted) –HHLIC

Licensed Drivers in Household	Count	Percent
0	20654	8.8%
1	85159	36.2%
2	99352	42.3%
3	22443	9.5%
4	6834	2.9%
5	567	0.2%
Total	235009	100.0%

SRPEDD-17: Distribution of Households by Day of Week of Travel (Weighted) – DAY

Day of Week of Travel	Count	Percent
Monday	49591	21.1%
Tuesday	44171	18.8%
Wednesday	42745	18.2%
Thursday	46995	20.0%
Friday	51506	21.9%
Total	235009	100.0%

Person Characteristics

SRPEDD-18: Respondent Gender (Weighted) – GEND

Respondent Gender	Count	Percent
Male	268360	46.7%
Female	305762	53.3%
Total	574122	100.0%

SRPEDD-19: Age Distribution (Weighted) – AGE

Age Distribution	Count	Percent
Younger than 20	141794	24.7%
20 to 34 years	115506	20.1%
35 to 54 years	166558	29.0%
55 to 64 years	62984	11.0%
65 years or older	82656	14.4%
Refused Age	4623	0.8%
Total	574122	100.0%

SRPEDD-20: Valid Driver's License (Weighted)-LIC

Valid Driver's License	Count	Percent
Yes	392539	84.0%
No	74821	16.0%
Total	467360	100.0%

SRPEDD-21: Respondent has Transit Pass (Weighted) – TRANS

Respondent has Transit Pass	Count	Percent
Yes	43739	9.4%
No	423238	90.6%
Don't Know	383	0.1%
Total	467360	100.0%

SRPEDD-22: Transit Pass Type (Weighted)- PASST1, PASST2, PASST3

Transit Pass Type, Multiple Response	Count	Percent
Local Bus Pass	12814	29.3%
Link Pass	1744	4.0%
Commuter Rail Pass	4971	11.4%
Charlie Card	15903	36.4%
Other, specify	6352	14.5%
Don't Know	1332	3.0%
Refused	622	1.4%
Total	43739	100.0%

SRPEDD-23: Worker Status, Computed (Weighted) – WORKS

Worker Status, Computed	Count	Percent
Yes	264831	56.7%
No	202529	43.3%
Total	467360	100.0%

SRPEDD-24: Employment Status, Non-workers (Weighted) – WKSTAT

Employment Status, Non workers	Count	Percent
Retired	74987	37.0%
Disabled/On Disability Status	40633	20.1%
Homemaker	16035	7.9%
Unemployed but looking for work	33655	16.6%
Unemployed and not looking for work	4171	2.1%
Student	30733	15.2%
Other, SPECIFY	705	0.3%
Refused	1609	0.8%
Total	202529	100.0%

SRPEDD-25: Average Number of Jobs (Weighted)-JOBS

Jobs	Average
Average Number of Jobs	1.12

SRPEDD-26: Hours Worked per Day (Weighted) - HOURS

Hours Worked per Day	Count	Percent
1	1023	0.4%
2	4523	1.7%
3	5554	2.1%
4	14152	5.3%
5	17196	6.5%
6	19137	7.2%
7	18820	7.1%
8	119182	45.0%
9	18634	7.0%
10	27285	10.3%
11	2229	0.8%
12	7834	3.0%
13	552	0.2%
14	1451	0.5%
15	921	0.3%
16	474	0.2%
17	262	0.1%
24	1095	0.4%
Don't Know	3898	1.5%
Refused	610	0.2%
Total	264831	100.0%

SRPEDD-27: Respondent Average Number of Days Worked Per Week (Weighted) – WDAYS

Days Worked Per Week	Count	Percent
1	2821	1.1%
2	10533	4.0%
3	21177	8.0%
4	27941	10.6%
5	178629	67.5%
6	16064	6.1%
7	7131	2.7%
Refused	535	0.2%
Total	264831	100.0%

SRPEDD-28: Telecommute Status (Weighted) - TELEW

Worker Telecommutes	Count	Percent
Yes	33833	12.8%
No	226585	85.6%
Don't Know	3341	1.3%
Refused	1072	0.4%
Total	264831	100.0%

SRPEDD-29: Flexible Work Program Offered at Work (Weighted) – SCHED

Flexible Work Program Offered at Work	Count	Percent
Yes	48247	18.2%
No	202965	76.6%
Don't Know	12830	4.8%
Refused	789	0.3%
Total	264831	100.0%

SRPEDD-30: Type of Flexible Work Programs Offered, Multiple Response (Weighted)- FLEXP1, FLEXP2, FLEXP3

Type of Flexible Work Programs Offered, Multiple Response	Count	Percent
9/80 Work Period	2493	5.1%
Early Arrival/Departure	16650	33.8%
4/40 Work Week	4297	8.7%
Flexible Hours	12855	26.1%
Other, Specify	5879	11.9%
Don't Know	5792	11.8%
Refused	1313	2.7%
Total	49278	100.0%

SRPEDD-31: Respondent Participates in Flexible Work Program (Weighted)-FLEXT

Respondent Participates in Flexible Work Program	Count	Percent
Yes	39315	81.5%
No	7429	15.4%
Don't Know	1503	3.1%
Total	48247	100.0%

SRPEDD-32: Disabled License Plate (Weighted)- EDISA

Disabled License Plate	Count	Percent
Yes	29573	5.5%
No	511647	94.3%
Don't Know	560	0.1%
Refused	696	0.1%
Total	542475	100.0%

SRPEDD-33: Disabled Transit Registration (Weighted) –EDIS2

Disabled Transit Registration	Count	Percent
Yes	21244	3.9%
No	520043	95.9%
Don't Know	493	0.1%
Refused	696	0.1%
Total	542475	100.0%

SRPEDD-34: Level of Education Completed (Weighted) –EDUCA

Level of Education Completed	Count	Percent
Not a high school graduate, 12th grade or less. (Includes very young children)	159483	27.8%
High school graduate (high school diploma or GED)	143336	25.0%
Some college credit but no degree	63504	11.1%
Associate or technical school degree	48065	8.4%
Bachelor's or undergraduate degree	98749	17.2%
Graduate Degree (includes professional degrees, MD, DDs, JD)	57924	10.1%
Other, SPECIFY	240	0.0%
Don't Know	2502	0.4%
Refused	319	0.1%
Total	574122	100.0%

SRPEDD-35: School Enrollment Status (Weighted)-ENROL

School Enrollment Status	Count	Percent
Yes	159569	27.8%
No	414424	72.2%
Don't Know	130	0.0%
Total	574122	100.0%

SRPEDD-36: Full-time / Part-time Student Status (Weighted)-FPTIM

Full-time / Part-time Student Status	Count	Percent
Part-time	29623	18.6%
Full-time	129946	81.4%
Total	159569	100.0%

SRPEDD-37: Student Grade Level Attends (Weighted)-SCHOL

Student Grade Level	Count	Percent
Daycare	2703	1.7%
Nursery School, Preschool	7805	4.9%
Kindergarten to Grade 8	66348	41.6%
Grade 9 to 12	38483	24.1%
Technical/Vocational School	5277	3.3%
Two-year college (community college)	15622	9.8%
4-year college or university	14245	8.9%
Graduate School/Professional	8780	5.5%
Other, SPECIFY	306	0.2%
Total	159569	100.0%

SRPEDD-38: Transit Trips Made in Past Week (Weighted)- TTRIP

Transit Trips Made in Past Week	Count	Percent
0	477468	83.2%
1	8673	1.5%
2	19531	3.4%
3	3669	0.6%
4	7514	1.3%
5	5277	0.9%
6	6222	1.1%
7	1018	0.2%
8	5159	0.9%
9	305	0.1%
10	19771	3.4%
11	242	0.0%
12	2886	0.5%
14	3789	0.7%
15	361	0.1%
16	865	0.2%
18	104	0.0%
19	132	0.0%
20	1774	0.3%
25	558	0.1%
28	805	0.1%
30	799	0.1%
40	89	0.0%
50	542	0.1%
Don't Know	6192	1.1%
Refused	376	0.1%
Total	574122	100.0%

SRPEDD-39: Bike Facilities Available at Work/School (Weighted)- BIKFA

Bike Facilities Available at Work/School	Count	Percent
Yes	150960	38.3%
No	187564	47.6%
Don't Know	51080	13.0%
Refused	4350	1.1%
Total	393953	100.0%

SRPEDD-40: Days Used Bike for Recreation in Past Week (Weighted)- BIKD1

Days Used Bike for Recreation in Past Week	Count	Percent
0	262502	71.6%
1	18546	5.1%
2	16177	4.4%
3	4776	1.3%
4	2564	0.7%
5	2546	0.7%
6	298	0.1%
7	2594	0.7%
Don't Know	36023	9.8%
Refused	20453	5.6%
Total	366478	100.0%

SRPEDD-41: Days Used Bike for Transportation in Past Week (Weighted) – BIKD2

Days Used Bike for Transportation in Past Week	Count	Percent
0	291810	79.6%
1	4589	1.3%
2	4990	1.4%
3	2362	0.6%
4	1778	0.5%
5	2799	0.8%
6	0	0%
7	962	0.3%
Don't Know	36408	9.9%
Refused	20781	5.7%
Total	366478	100.0%

SRPEDD-42: Bike Lanes/Trails Used (Weighted) – BIKRD

Bike Lanes/Trails Used for Non-Recreational Purposes	Count	Percent
Off-Road	33587	9.2%
On-Road	84824	23.1%
Both	72306	19.7%
Don't Know	140923	38.5%
Refused	34838	9.5%
Total	366478	100.0%

SRPEDD-43: Internet was Used on Travel Day in Place of Trips (Weighted)-INUSE

Internet was used on Travel Day in Place of Trips	Count	Percent
Yes	19462	3.4%
No	525803	91.6%
Don't Know	27763	4.8%
Refused	1094	0.2%
Total	574122	100.0%

SRPEDD-44: Reason for Non-Travel (Weighted)-NOGO

Reason for Non-Travel	Count	Percent
Personally Sick	17745	18.8%
Caretaking Sick Kids	1170	1.2%
Caretaking Sick Other	189	0.2%
Homebound Elderly or Disabled	12467	13.2%
Worked at Home for Pay	2564	2.7%
Worked Around Home (Not for Pay)	30268	32.1%
Out of Area	5348	5.7%
Other, SPECIFY	24571	26.1%
Total	94321	100.0%

Vehicle Characteristics

SRPEDD-45: Vehicle Year (Weighted) – YEAR

Vehicle Year	Count	Percent
1964 or older	1978	0.5%
1965-1979	3763	1.0%
1980-1989	7860	2.0%
1990-1999	85718	22.3%
2000-2003	103535	26.9%
2004-2006	85475	22.2%
2007	26654	6.9%
2008	21377	5.6%
2009	21607	5.6%
2010	21726	5.7%
2011	4820	1.3%
Total	384512	100.0%

SRPEDD-46: Vehicle Make (Weighted) – MAKE

Vehicle Make	Count	Percent
Acura	2291	0.6%
Audi	2307	0.6%
BMW	3805	1.0%
Buick	7955	2.0%
Cadillac	1973	0.5%
Chevrolet	39184	10.0%
Chrysler	9222	2.3%
Dodge	22730	5.8%
Ford	50279	12.8%
Geo	552	0.1%
GMC	10846	2.8%
Harley Davidson	4778	1.2%
Honda	35134	8.9%
Hummer	325	0.1%
Hyundai	13052	3.3%
Infiniti	1477	0.4%
Isuzu	240	0.1%
Jaguar	355	0.1%
Jeep	10767	2.7%
Kawasaki	699	0.2%
Kia	4475	1.1%
Lexus	3526	0.9%
Lincoln	2499	0.6%
Mazda	7490	1.9%

Vehicle Make	Count	Percent
Mercedes	3262	0.8%
Mercury	6198	1.6%
Mitsubishi	3742	1.0%
Nissan	20735	5.3%
Oldsmobile	1509	0.4%
Plymouth	1900	0.5%
Pontiac	6397	1.6%
Porsche	655	0.2%
Range Rover	169	0.0%
Saab	2176	0.6%
Saturn	11086	2.8%
Scion	187	0.0%
Subaru	8779	2.2%
Suzuki	1883	0.5%
Toyota	62559	15.9%
Volkswagen	7976	2.0%
Volvo	10058	2.6%
Yamaha	1469	0.4%
Other, SPECIFY	5134	1.3%
Don't Know	1156	0.3%
Refused	201	0.1%
Total	393191	100.0%

SRPEDD-47: Vehicle Body Type (Weighted) – BODY

Vehicle Body Type	Count	Percent
Car/Station Wagon	193710	49.3%
Van (any type)	32077	8.2%
SUV	81754	20.8%
Pickup Truck	51045	13.0%
Other type of truck	841	0.2%
RV	1141	0.3%
Motorcycle	9957	2.5%
Other, SPECIFY	818	0.2%
Refused	21849	5.6%
Total	393191	100.0%

SRPEDD-48: Vehicle Fuel Type (Weighted) - FUEL

Vehicle Fuel Type	Count	Percent
Gas	381947	97.1%
Diesel	6425	1.6%
Hybrid	3730	0.9%
Flex Fuel	920	0.2%
Don't Know	169	0.0%
Total	393191	100.0%

Place Characteristics

SRPEDD-49: Primary Trip Purpose (Weighted) – TPURP

Primary Trip Purpose	Count	Percent
All other home activities	1206393	45.6%
Work/Job	203454	7.7%
Routine shopping (groceries, clothing, convenience store, HH maintenance)	194736	7.4%
Changed type of transportation	182549	6.9%
Visit friends/relatives	96967	3.7%
Eat meal outside of home	95177	3.6%
Attending Class	89707	3.4%
Household errands (bank, dry cleaning, etc.)	77356	2.9%
Drop off passenger from car	69176	2.6%
Pick up passenger from car	68494	2.6%
Work Business Related	61521	2.3%
Personal business (visit government office, attorney, accountant)	60003	2.3%
Indoor recreation/entertainment	55281	2.1%
Health care (doctor, dentist)	53448	2.0%
Outdoor recreation/entertainment	35454	1.3%
Service private vehicle (gas, oil lube, etc.)	31957	1.2%
Shopping for major purchases or specialty items (appliance, electronics, new vehicle, major HH repairs)	15960	0.6%
Working at home (for pay)	14552	0.5%
Civic/Religious activities	11358	0.4%
All other School Activities	8826	0.3%
Loop trip	7873	0.3%
All other activities at work	5836	0.2%
Other, SPECIFY	1289	0.0%
Volunteer Work/Activities	97	0.0%
While Traveling -- Other, Specify	0	0.0%
Total	2647465	100.0%

SRPEDD-50: Total People Traveling in Travel Party, Including Respondent (Weighted) – TOTTR

Total People Traveling	Count	Percent
1 person	1125565	56.8%
2 persons	523024	26.4%
3 persons	223793	11.3%
4 persons	58089	2.9%
5 persons	52009	2.6%
Total	1982480	100.0%

SRPEDD-51: Parking Location (Weighted) – PRKTY

Parking Location	Count	Percent
Parking Lot	760420	46.8%
Parking Garage	16193	1.0%
Street	150274	9.2%
Driveway/personal garage	547657	33.7%
Did not park	134996	8.3%
Other, SPECIFY	4944	0.3%
Don't Know	8454	0.5%
Refused	2216	0.1%

SRPEDD-52: Paid to Park (Weighted) – PRKCS

Paid to Park	Count	Percent
Did not Pay	1476039	90.8%
Did Pay, record amount	13121	0.8%
Don't Know	3379	0.2%
Refused	132616	8.2%
Total	1625154	100.0%

SRPEDD-53: How Parking Fare was Paid (Weighted) – PRKHW

How Parking Fare was Paid	Count	Percent
Cash/Credit/Debit Card	11469	87.4%
Per-Paid parking Pass	1100	8.4%
Employer-Provided Parking Pass	551	4.2%
Total	13121	100.0%

SRPEDD-54: Toll Road Used on Trip (Weighted) – TOLL (Use a Toll road)?

Use a Toll Road	Count	Percent
Yes	3876	0.2%
No	1581403	97.3%
Don't Know	38537	2.4%
Refused	1339	0.1%
Total	1625154	100.0%

SRPEDD-55: Toll Road Used (Weighted) – TOLLT (Which Toll road was used)?

Which Toll Road was Used	Count	Percent
Turnpike	3439	88.7%
Ted Williams Tunnel	146	3.8%
Sumner Tunnel	291	7.5%
Total	3876	100.0%

Travel Behavior

SRPEDD-56: Average Household and Person Trip Rates (Weighted)

	Average Trip Rate
Household	10.6
Person	4.1

SRPEDD-57: Trip Rates by Household Size (Weighted)

Household Size	Trip Rate
1	4.5
2	8.3
3	13.6
4	17.5
5	22.2
6	26.6
7	24.8
8 or more	29.8
Total	10.6

SRPEDD-58: Trip Rates by Number of Household Workers (Weighted)

Household Workers	Trip Rate
0	6.6
1	9.7
2	13.1
3	16.8
4	22.0
5	27.2
6	22.7
Total	10.6

SRPEDD-59: Trip Rates by Household Income (Weighted)

Household Income	Trip Rate
Less than $15,000	8.3
$15,000-$24,999	9.2
$25,000-$34,999	8.4
$35,000-$49,999	9.4
$50,000-$74,999	10.2
$75,000-$99,999	11.4
$100,000-$149,999	13.2
$150,000 or more	13.3
Don't Know/Refused	9.8
Total	10.6

SRPEDD-60: All Trip Modes (Weighted)

Transportation Mode	Count	Percent
Walk	255596	12.3%
Bike	8828	0.4%
Auto/Van/Truck Driver	1208156	58.3%
Auto/Van/Truck Passenger	415249	20.0%
Public Bus	60654	2.9%
Train	23671	1.1%
Ferry/boat	1515	0.1%
Dial-A-Ride/Paratransit	2937	0.1%
Taxi	15319	0.7%
School bus	75543	3.6%
Motorcycle Driver	1749	0.1%
Other, SPECIFY	4125	0.2%
Total	2073343	100.0%

SRPEDD-61: Mode to Work (Weighted)

Mode to Work	Count	Percent
Works from home	15066	5.7%
Walk	3857	1.5%
Bike	235	0.1%
Auto/Van/Truck Driver	214326	80.9%
Auto/Van/Truck Passenger	15112	5.7%
Bus / Public Transit	10575	4.0%
Dial-A-Ride/Paratransit	234	0.1%
Taxi	438	0.2%
Other, SPECIFY	3793	1.4%
Don't Know	780	0.3%
Refused	417	0.2%
Total	264831	100.0%

SRPEDD-62: Mode to School (Weighted)

Mode to School	Count	Percent
Home schooled	4739	3.0%
Walk	12964	8.1%
Bike	612	0.4%
Auto/Van/Truck Driver	30810	19.3%
Auto/Van/Truck Passenger	39022	24.5%
Bus / Public Transit	7618	4.8%
Dial-A-Ride/Paratransit	123	0.1%
School Bus	59973	37.6%
Other, SPECIFY	1533	1.0%
Don't Know	2175	1.4%
Total	159569	100.0%

Survey Results for Pioneer Valley MPO (PVPC)

Household Characteristics

PVPC-1: Household Size (Weighted) – HHSIZ

Household Size	Count	Percent
1	70763	29.9%
2	78501	33.2%
3	36836	15.6%
4	35826	15.2%
5	9826	4.2%
6	3046	1.3%
7	1398	0.6%
8 or More	140	0.1%
Total	236337	100.0%

PVPC-2: Transit Used on Regular Basis (Weighted) –RIBUS

Transit Used on Regular Basis	Count	Percent
Yes	38743	16.4%
No	197326	83.5%
Don't Know	268	0.1%
Total	236337	100.0%

PVPC-3: Household Bicycles (Weighted) – HHBIC

Household Bicycles	Count	Percent
0	95131	40.3%
1	40011	16.9%
2	45279	19.2%
3	23129	9.8%
4	17851	7.6%
5	8318	3.5%
6	4114	1.7%
7	950	0.4%
8	1431	0.6%
Don't Know	123	0.1%
Total	236337	100.0%

PVPC-4: Household Number of Vehicles (Weighted)-HHVEH

Household Vehicles	Count	Percent
0	30459	12.9%
1	85891	36.3%
2	84407	35.7%
3	22615	9.6%
4	8796	3.7%
5	2750	1.2%
6	913	0.4%
7	412	0.2%
8 or More	93	0.0%
Total	236337	100.0%

PVPC-5: Household Ethnicity (Weighted)-RACE

Household Ethnicity	Count	Percent
White Alone	196969	83.3%
Black or African American Alone	12371	5.2%
American Indian or Alaskan Native Alone	87	0.0%
Asian Alone	2208	0.9%
Some Other Race Alone	16785	7.1%
Two or More Races	5919	2.5%
Refused	1997	0.8%
Total	236337	100.0%

PVPC-6: Hispanic or Latino Households (Weighted) – HISP

Hispanic or Latino Household	Count	Percent
Yes	24952	10.6%
No	210020	88.9%
Refused	1365	0.6%
Total	236337	100.0%

PVPC-7: Household Residence Type (Weighted)-RESTY

Household Residence Type	Count	Percent
Single Family Detached Dwelling	159716	67.6%
Building with 2-4 Units	42866	18.1%
Building with 5-19 Units	16425	6.9%
Building with 20 or More Units	15573	6.6%
or Something Else?	817	0.3%
Don't Know	421	0.2%
Refused	518	0.2%
Total	236337	100.0%

PVPC-8: Ownership of Household Residence (Weighted) – OWN

Home Ownership	Count	Percent
Own/Mortgaged	169451	71.7%
Renter	66277	28.0%
Other, Specify	332	0.1%
Don't Know	277	0.1%
Total	236337	100.0%

PVPC-9: Cell phone lines in Household (Weighted) – CPLNS

Cell Phones in Household	Count	Percent
0	26395	11.2%
1	83166	35.2%
2	80136	33.9%
3	25578	10.8%
4	16594	7.0%
5	2946	1.2%
6	801	0.3%
7	118	0.0%
8	233	0.1%
Refused	370	0.2%
Total	236337	100.0%

PVPC-10: Landlines in Household (Weighted)-PHLNS

Landlines in Household	Count	Percent
0	1326	1.1%
1	113803	92.9%
2	6124	5.0%
3	1285	1.0%
Total	122538	100.0%

PVPC-11: Fax Lines in Household (Weighted) – FXLNS

Fax Lines in Household	Count	Percent
0	8882	62.7%
1	4759	33.6%
2	103	0.7%
Don't Know	429	3.0%
Total	14172	100.0%

PVPC-12: Household Income (Weighted) – INCOME

Household Income	Count	Percent
Less than $15,000	38505	16.3%
$15,000-$24,999	24499	10.4%
$25,000-$34,999	20766	8.8%
$35,000-$49,999	34485	14.6%
$50,000-$74,999	45036	19.1%
$75,000-$99,999	30522	12.9%
$100,000-$149,999	18515	7.8%
$150,000 or more	13407	5.7%
Don't Know/Refused	10602	4.5%
Total	236337	100.0%

PVPC-13: Trips Made by Household on Travel Day (Weighted) – HTRIPS

Trips Made by Household on Travel Day	Count	Percent
None	11824	5.0%
1 to 5	75176	31.8%
6 to 10	69556	29.4%
11 to 15	37080	15.7%
16 to 20	21830	9.2%
21 to 30	16482	7.0%
31 to 50	4253	1.8%
50+	135	0.1%
Total	236337	100.0%

PVPC-14: Household Students (Weighted) – HHSTU

Household Students	Count	Percent
0	151347	64.0%
1	39355	16.7%
2	30774	13.0%
3	11482	4.9%
4	1960	0.8%
5	1058	0.4%
6	360	0.2%
Total	236337	100.0%

PVPC-15: Household Workers (Weighted) – HHWRK

Household Workers	Count	Percent
0	72162	30.5%
1	82164	34.8%
2	65535	27.7%
3	13030	5.5%
4	2660	1.1%
5	693	0.3%
6	93	0.0%
Total	236337	100.0%

PVPC-16: Licensed Drivers in Household (Weighted) –HHLIC

Licensed Drivers in Household	Count	Percent
0	20293	8.6%
1	82103	34.7%
2	106720	45.2%
3	21253	9.0%
4	4937	2.1%
5	847	0.4%
6	185	0.1%
Total	236337	100.0%

PVPC-17: Distribution of Households by Day of Week of Travel (Weighted) – DAY

Day of Week of Travel	Count	Percent
Monday	48374	20.5%
Tuesday	46938	19.9%
Wednesday	48457	20.5%
Thursday	45042	19.1%
Friday	47526	20.1%
Total	236337	100.0%

Person Characteristics

PVPC-18: Respondent Gender (Weighted) – GEND

Respondent Gender	Count	Percent
Male	281423	46.3%
Female	325486	53.6%
Refused	354	0.1%
Total	607263	100.0%

PVPC-19: Age Distribution (Weighted) –AGE

Age Distribution	Count	Percent
Younger than 20	147800	24.3%
20 to 34 years	113807	18.7%
35 to 54 years	177729	29.3%
55 to 64 years	66493	10.9%
65 years or older	89274	14.7%
Refused Age	12160	2.0%
Total	607263	100.0%

PVPC-20: Valid Driver's License (Weighted)-LIC

Valid Driver's License	Count	Percent
Yes	399552	81.8%
No	88833	18.2%
Refused	94	0.0%
Total	488478	100.0%

PVPC-21: Respondent has Transit Pass (Weighted) – TRANS

Respondent has Transit Pass	Count	Percent
Yes	39862	8.2%
No	446286	91.4%
Don't Know	2236	0.5%
Refused	94	0.0%
Total	488478	100.0%

PVPC-22: Transit Pass Type (Weighted)-PASST1, PASST2, PASST3

Transit Pass Type, Multiple Response	Count	Percent
Local Bus Pass	17176	43.1%
Link Pass	1276	3.2%
Commuter Rail Pass	488	1.2%
Charlie Card	4827	12.1%
Other, specify	10802	27.1%
Don't Know	3885	9.7%
Refused	1408	3.5%
Total	39862	100.0%

PVPC-23: Worker Status, Computed (Weighted) – WORKS

Worker Status, Computed	Count	Percent
Yes	279701	57.3%
No	208777	42.7%
Total	488478	100.0%

PVPC-24: Employment Status, Non-workers (Weighted) – WKSTAT

Employment Status, Non workers	Count	Percent
Retired	77291	37.0%
Disabled/On Disability Status	48784	23.4%
Homemaker	24052	11.5%
Unemployed but looking for work	22211	10.6%
Unemployed and not looking for work	4217	2.0%
Student	30780	14.7%
Other, SPECIFY	800	0.4%
Refused	642	0.3%
Total	208777	100.0%

PVPC-25: Average Number of Jobs (Weighted)-JOBS

Jobs	Average
Average Number of Jobs	1.46

PVPC-26: Hours Worked per Day (Weighted) - HOURS

Hours Worked per Day	Count	Percent
1	1392	0.5%
2	3528	1.3%
3	6685	2.4%
4	20051	7.2%
5	17760	6.3%
6	22877	8.2%
7	22189	7.9%
8	116220	41.6%
9	27027	9.7%
10	21211	7.6%
11	2911	1.0%
12	10747	3.8%
13	351	0.1%
14	420	0.2%
15	501	0.2%
16	566	0.2%
20	298	0.1%
24	689	0.2%
Don't Know	3473	1.2%
Refused	804	0.3%
Total	279701	100.0%

PVPC-27: Respondent Average Number of Days Worked Per Week (Weighted) – WDAYS

Days Worked Per Week	Count	Percent
1	4910	1.8%
2	9422	3.4%
3	20515	7.3%
4	28624	10.2%
5	184868	66.1%
6	21933	7.8%
7	8682	3.1%
Don't Know	600	0.2%
Refused	147	0.1%
Total	279701	100.0%

PVPC-28: Telecommute Status (Weighted) - TELEW

Worker Telecommutes	Count	Percent
Yes	45485	16.3%
No	231256	82.7%
Don't Know	2866	1.0%
Refused	95	0.0%
Total	279701	100.0%

PVPC-29: Flexible Work Program Offered at Work (Weighted) – SCHED

Flexible Work Program Offered at Work	Count	Percent
Yes	56056	20.0%
No	211904	75.8%
Don't Know	11402	4.1%
Refused	340	0.1%
Total	279701	100.0%

PVPC-30: Type of Flexible Work Programs Offered, Multiple Response (Weighted)- FLEXP1, FLEXP2, FLEXP3

Type of Flexible Work Programs Offered, Multiple Response	Count	Percent
9/80 Work Period	2601	4.5%
Early Arrival/Departure	20033	34.4%
4/40 Work Week	4528	7.8%
Flexible Hours	13007	22.3%
Other, Specify	9839	16.9%
Don't Know	6178	10.6%
Refused	2076	3.6%
Total	58263	100.0%

PVPC-31: Respondent Participates in Flexible Work Program (Weighted)-FLEXT

Respondent Participates in Flexible Work Program	Count	Percent
Yes	48500	86.5%
No	5729	10.2%
Don't Know	1827	3.3%
Total	56056	100.0%

PVPC-32: Disabled License Plate (Weighted)- EDISA

Disabled License Plate	Count	Percent
Yes	39308	6.9%
No	529217	92.7%
Don't Know	1716	0.3%
Refused	800	0.1%
Total	571042	100.0%

PVPC-33: Disabled Transit Registration (Weighted) –EDIS2

Disabled Transit Registration	Count	Percent
Yes	24107	4.2%
No	544800	95.4%
Don't Know	1335	0.2%
Refused	800	0.1%
Total	571042	100.0%

PVPC-34: Level of Education Completed (Weighted) –EDUCA

Level of Education Completed	Count	Percent
Not a high school graduate, 12th grade or less. (Includes very young children)	172531	28.4%
High school graduate (high school diploma or GED)	122626	20.2%
Some college credit but no degree	63321	10.4%
Associate or technical school degree	48246	7.9%
Bachelor's or undergraduate degree	95824	15.8%
Graduate Degree (includes professional degrees, MD, DDs, JD)	101220	16.7%
Don't Know	2966	0.5%
Refused	528	0.1%
Total	607263	100.0%

PVPC-35: School Enrollment Status (Weighted)-ENROL

School Enrollment Status	Count	Percent
Yes	175107	28.8%
No	431837	71.1%
Don't Know	135	0.0%
Refused	184	0.0%
Total	607263	100.0%

PVPC-36: Full-time / Part-time Student Status (Weighted)-FPTIM

Full-time / Part-time Student Status	Count	Percent
Part-time	41121	23.5%
Full-time	133756	76.4%
Don't Know	230	0.1%
Total	175107	100.0%

PVPC-37: Student Grade Level Attends (Weighted)-SCHOL

Student Grade Level	Count	Percent
Daycare	6846	3.9%
Nursery School, Preschool	9179	5.2%
Kindergarten to Grade 8	76056	43.4%
Grade 9 to 12	34709	19.8%
Technical/Vocational School	3722	2.1%
Two-year college (community college)	16823	9.6%
4-year college or university	17245	9.8%
Graduate School/Professional	10256	5.9%
Other, SPECIFY	131	0.1%
Don't Know/Refused	139	0.1%
Total	175107	100.0%

PVPC-38: Transit Trips Made in Past Week (Weighted)- TTRIP

Transit Trips Made in Past Week	Count	Percent
0	498010	82.0%
1	11562	1.9%
2	20329	3.3%
3	10675	1.8%
4	7908	1.3%
5	6081	1.0%
6	7410	1.2%
7	2879	0.5%
8	3936	0.6%
9	428	0.1%
10	17527	2.9%
11	222	0.0%
12	1486	0.2%
13	506	0.1%
14	6033	1.0%
15	895	0.1%
16	1553	0.3%
18	52	0.0%
20	294	0.0%
21	173	0.0%
25	523	0.1%
30	521	0.1%
34	152	0.0%
35	148	0.0%
75	162	0.0%
87	81	0.0%
Don't Know	7625	1.3%
Refused	94	0.0%
Total	607263	100.0%

PVPC-39: Bike Facilities Available at Work/School (Weighted)- BIKFA

Bike Facilities Available at Work/School	Count	Percent
Yes	188971	45.3%
No	175555	42.1%
Don't Know	46610	11.2%
Refused	6012	1.4%
Total	417149	100.0%

PVPC-40: Days Used Bike for Recreation in Past Week (Weighted)- BIKD1

Days Used Bike for Recreation in Past Week	Count	Percent
0	269834	63.7%
1	24927	5.9%
2	23185	5.5%
3	14037	3.3%
4	6626	1.6%
5	5112	1.2%
6	1171	0.3%
7	3723	0.9%
Don't Know	45255	10.7%
Refused	29514	7.0%
Total	423385	100.0%

PVPC-41: Days Used Bike for Transportation in Past Week (Weighted) – BIKD2

Days Used Bike for Transportation in Past Week	Count	Percent
0	313918	74.1%
1	7617	1.8%
2	8609	2.0%
3	3400	0.8%
4	4208	1.0%
5	3875	0.9%
6	1708	0.4%
7	1968	0.5%
Don't Know	48829	11.5%
Refused	29252	6.9%
Total	423385	100.0%

PVPC-42: Bike Lanes/Trails Used (Weighted) – BIKRD

Bike Lanes/Trails Used for Non-Recreational Purposes	Count	Percent
Off-Road	59118	14.0%
On-Road	79614	18.8%
Both	104477	24.7%
Don't Know	134142	31.7%
Refused	46034	10.9%
Total	423385	100.0%

PVPC-43: Internet was Used on Travel Day in Place of Trips (Weighted)-INUSE

Internet was used on Travel Day in Place of Trips	Count	Percent
Yes	24468	4.0%
No	552375	91.0%
Don't Know	27706	4.6%
Refused	2714	0.4%
Total	607263	100.0%

PVPC-44: Reason for Non-Travel (Weighted)-NOGO

Reason for Non-Travel	Count	Percent
Personally Sick	10135	12.5%
Caretaking Sick Kids	125	0.2%
Caretaking Sick Other	1065	1.3%
Homebound Elderly or Disabled	12008	14.8%
Worked at Home for Pay	3375	4.2%
Worked Around Home (Not for Pay)	27842	34.3%
Out of Area	2440	3.0%
Other, SPECIFY	24125	29.7%
Total	81115	100.0%

Vehicle Characteristics

PVPC-45: Vehicle Year (Weighted) – YEAR

Vehicle Year	Count	Percent
1964 or older	746	0.2%
1965-1979	3681	1.0%
1980-1989	7061	1.9%
1990-1999	79180	21.3%
2000-2003	96310	26.0%
2004-2006	93566	25.2%
2007	26012	7.0%
2008	21934	5.9%
2009	18489	5.0%
2010	20495	5.5%
2011	3607	1.0%
Total	371081	100.0%

PVPC-46: Vehicle Make (Weighted) – MAKE

Vehicle Make	Count	Percent
Acura	1931	0.5%
Audi	1801	0.5%
BMW	4029	1.1%
Buick	10638	2.8%
Cadillac	3511	0.9%
Chevrolet	36545	9.6%
Chrysler	8892	2.3%
Dodge	23514	6.2%
Ford	39210	10.3%
Geo	629	0.2%
GMC	4475	1.2%
Harley Davidson	3929	1.0%
Honda	49290	13.0%
Hyundai	16514	4.3%
Infiniti	969	0.3%
Isuzu	96	0.0%
Jaguar	85	0.0%
Jeep	12250	3.2%
Kawasaki	1469	0.4%
Kia	2226	0.6%
Lexus	2432	0.6%
Lincoln	2252	0.6%
Mazda	5964	1.6%
Mercedes	1534	0.4%
Mercury	4531	1.2%

Vehicle Make	Count	Percent
Mitsubishi	2136	0.6%
Nissan	20017	5.3%
Oldsmobile	2771	0.7%
Plymouth	2444	0.6%
Pontiac	7886	2.1%
Porsche	280	0.1%
Range Rover	65	0.0%
Saab	1626	0.4%
Saturn	6561	1.7%
Scion	684	0.2%
Subaru	17790	4.7%
Suzuki	1024	0.3%
Toyota	53480	14.1%
Volkswagen	8192	2.2%
Volvo	6494	1.7%
Yamaha	1797	0.5%
Other, SPECIFY	4330	1.1%
Don't Know	1493	0.4%
Refused	2808	0.7%
Total	380592	100.0%

PVPC-47: Vehicle Body Type (Weighted) – BODY

Vehicle Body Type	Count	Percent
Car/Station Wagon	195757	51.4%
Van (any type)	34651	9.1%
SUV	79434	20.9%
Pickup Truck	39218	10.3%
Other type of truck	742	0.2%
RV	440	0.1%
Motorcycle	8485	2.2%
Other, SPECIFY	511	0.1%
Refused	21353	5.6%
Total	380592	100.0%

PVPC-48: Vehicle Fuel Type (Weighted) - FUEL

Vehicle Fuel Type	Count	Percent
Gas	365043	95.9%
Diesel	4205	1.1%
Hybrid	7716	2.0%
Flex Fuel	1211	0.3%
Other, SPECIFY	803	0.2%
Don't Know	134	0.0%
Refused	1480	0.4%
Total	380592	100.0%

Place Characteristics

PVPC-49: Primary Trip Purpose (Weighted) – TPURP

Primary Trip Purpose	Count	Percent
All other home activities	1347859	45.3%
Routine shopping (groceries, clothing, convenience store, HH maintenance)	224937	7.6%
Work/Job	217829	7.3%
Changed type of transportation	173929	5.8%
Visit friends/relatives	102281	3.4%
Eat meal outside of home	96901	3.3%
Drop off passenger from car	96245	3.2%
Attending Class	93022	3.1%
Pick up passenger from car	86881	2.9%
Household errands (bank, dry cleaning, etc.)	80494	2.7%
Work Business Related	72342	2.4%
Outdoor recreation/entertainment	66402	2.2%
Personal business (visit government office, attorney, accountant)	65137	2.2%
Health care (doctor, dentist)	63334	2.1%
Indoor recreation/entertainment	62312	2.1%
Service private vehicle (gas, oil lube, etc.)	31030	1.0%
Civic/Religious activities	29006	1.0%
Working at home (for pay)	19926	0.7%
Shopping for major purchases or specialty items (appliance, electronics, new vehicle, major HH repairs)	17242	0.6%
All other School Activities	10515	0.4%
All other activities at work	9195	0.3%
Loop trip	5097	0.2%
Other, SPECIFY	1212	0.0%
Volunteer Work/Activities	567	0.0%
While Traveling -- Other, Specify	0	0.0%
Total	2973695	100.0%

PVPC-50: Total People Traveling in Travel Party, Including Respondent (Weighted) – TOTTR

Total People Traveling	Count	Percent
1 person	1184590	51.5%
2 persons	677414	29.4%
3 persons	277001	12.0%
4 persons	104867	4.6%
5 persons	56579	2.5%
Total	2300452	100.0%

PVPC-51: Parking Location (Weighted) – PRKTY

Parking Location	Count	Percent
Parking Lot	885196	47.7%
Parking Garage	19814	1.1%
Street	156909	8.4%
Driveway/personal garage	626107	33.7%
Did not park	146248	7.9%
Other, SPECIFY	8069	0.4%
Don't Know	12485	0.7%
Refused	2808	0.2%
Total	1857637	100.0%

PVPC-52: Paid to Park (Weighted) – PRKCS

Paid to Park	Count	Percent
Did not Pay	1682012	90.5%
Did Pay, record amount	21197	1.1%
Don't Know	8196	0.4%
Refused	146232	7.9%
Total	1857637	100.0%

PVPC-53: How Parking Fare was Paid (Weighted) – PRKHW

How Parking Fare was Paid	Count	Percent
Cash/Credit/Debit Card	17566	82.9%
Per-Paid parking Pass	2739	12.9%
Employer-Provided Parking Pass	892	4.2%
Total	21197	100.0%

PVPC-54: Toll Road Used on Trip (Weighted) – TOLL (Use a Toll road)?

Use a Toll Road	Count	Percent
Yes	34428	1.9%
No	1771652	95.4%
Don't Know	49062	2.6%
Refused	2495	0.1%
Total	1857637	100.0%

PVPC-55: Toll Road Used (Weighted) – TOLLT (Which Toll road was used)?

Which Toll Road was Used	Count	Percent
Turnpike	34367	99.8%
Ted Williams Tunnel	61	0.2%
Total	34428	100.0%

Travel Behavior

PVPC-56: Average Household and Person Trip Rates (Weighted)

	Average Trip Rate
Household	10.6
Person	4.1

PVPC-57: Trip Rates by Household Size (Weighted)

Household Size	Trip Rate
1	4.5
2	8.3
3	13.6
4	17.5
5	22.2
6	26.6
7	24.8
8 or more	29.8
Total	10.6

PVPC-58: Trip Rates by Number of Household Workers (Weighted)

Household Workers	Trip Rate
0	6.6
1	9.7
2	13.1
3	16.8
4	22.0
5	27.2
6	22.7
Total	10.6

PVPC-59: Trip Rates by Household Income (Weighted)

Household Income	Trip Rate
Less than $15,000	8.3
$15,000-$24,999	9.2
$25,000-$34,999	8.4
$35,000-$49,999	9.4
$50,000-$74,999	10.2
$75,000-$99,999	11.4
$100,000-$149,999	13.2
$150,000 or more	13.3
Don't Know/Refused	9.8
Total	10.6

PVPC-60: All Trip Modes (Weighted)

Transportation Mode	Count	Percent
Walk	321837	13.6%
Bike	29757	1.3%
Auto/Van/Truck Driver	1295841	54.8%
Auto/Van/Truck Passenger	558839	23.6%
Public Bus	75832	3.2%
Train	3525	0.1%
Dial-A-Ride/Paratransit	8062	0.3%
Taxi	5094	0.2%
School bus	60887	2.6%
Motorcycle Driver	2280	0.1%
Motorcycle Passenger	678	0.0%
Other, SPECIFY	3802	0.2%
Total	2366432	100.0%

PVPC-61: Mode to Work (Weighted)

Mode to Work	Count	Percent
Works from home	15493	5.5%
Walk	12485	4.5%
Bike	3726	1.3%
Auto/Van/Truck Driver	211362	75.6%
Auto/Van/Truck Passenger	20511	7.3%
Bus / Public Transit	10716	3.8%
Dial-A-Ride/Paratransit	644	0.2%
Motorcycle Driver	159	0.1%
Other, SPECIFY	2857	1.0%
Don't Know	1067	0.4%
Refused	682	0.2%
Total	279701	100.0%

PVPC-62: Mode to School (Weighted)

Mode to School	Count	Percent
Home schooled	5966	3.4%
Walk	18733	10.7%
Bike	3332	1.9%
Auto/Van/Truck Driver	30094	17.2%
Auto/Van/Truck Passenger	53940	30.8%
Bus / Public Transit	8625	4.9%
Dial-A-Ride/Paratransit	548	0.3%
School Bus	49247	28.1%
Other, SPECIFY	2706	1.5%
Don't Know	1823	1.0%
Refused	94	0.1%
Total	175107	100.0%

Survey Results for Central Massachusetts MPO (CMRPC)

Household Characteristics

CMRPC-1: Household Size (Weighted) – HHSIZ

Household Size	Count	Percent
1	54464	25.6%
2	66378	31.2%
3	32983	15.5%
4	39371	18.5%
5	14767	6.9%
6	4236	2.0%
7	130	0.1%
8 or More	397	0.2%
Total	212727	100.0%

CMRPC-2: Transit Used on Regular Basis (Weighted) –RIBUS

Transit Used on Regular Basis	Count	Percent
Yes	29822	14.0%
No	182905	86.0%
Total	212727	100.0%

CMRPC-3: Household Bicycles (Weighted) – HHBIC

Household Bicycles	Count	Percent
0	99100	46.6%
1	28096	13.2%
2	35118	16.5%
3	18302	8.6%
4	17084	8.0%
5	8006	3.8%
6	3594	1.7%
7	1643	0.8%
8	1218	0.6%
Don't Know	567	0.3%
Total	212727	100.0%

CMRPC-4: Household Number of Vehicles (Weighted)-HHVEH

Household Vehicles	Count	Percent
0	21392	10.1%
1	68842	32.4%
2	83187	39.1%
3	25978	12.2%
4	8484	4.0%
5	2728	1.3%
6	1712	0.8%
8 or More	405	0.2%
Total	212727	100.0%

CMRPC-5: Household Ethnicity (Weighted)-RACE

Household Ethnicity	Count	Percent
White Alone	182372	85.7%
Black or African American Alone	5944	2.8%
American Indian or Alaskan Native Alone	1292	0.6%
Asian Alone	3938	1.9%
Some Other Race Alone	9331	4.4%
Two or More Races	5358	2.5%
Refused	4492	2.1%
Total	212727	100.0%

CMRPC-6: Hispanic or Latino Households (Weighted) – HISP

Hispanic or Latino Household	Count	Percent
Yes	11645	5.5%
No	199658	93.9%
RF	1424	0.7%
Total	212727	100.0%

CMRPC-7: Household Residence Type (Weighted)-RESTY

Household Residence Type	Count	Percent
Single Family Detached Dwelling	141402	66.5%
Building with 2-4 Units	41670	19.6%
Building with 5-19 Units	17192	8.1%
Building with 20 or More Units	11981	5.6%
RF	483	0.2%
Total	212727	100.0%

CMRPC-8: Ownership of Household Residence (Weighted) – OWN

Home Ownership	Count	Percent
Own/Mortgaged	154871	72.8%
Renter	57644	27.1%
Other, Specify	213	0.1%
Total	212727	100.0%

CMRPC-9: Cell phone lines in Household (Weighted) – CPLNS

Cell Phones in Household	Count	Percent
0	22545	10.6%
1	61007	28.7%
2	77770	36.6%
3	28091	13.2%
4	17068	8.0%
5	3930	1.8%
6	1455	0.7%
7	183	0.1%
Don't Know	678	0.3%
Total	212727	100.0%

CMRPC-10: Landlines in Household (Weighted)-PHLNS

Landlines in Household	Count	Percent
0	1244	0.6%
1	197662	92.9%
2	10758	5.1%
3	2381	1.1%
4	181	0.1%
5	248	0.1%
Don't Know	253	0.1%
Total	212727	100.0%

CMRPC-11: Fax Lines in Household (Weighted) – FXLNS

Fax Lines in Household	Count	Percent
0	7383	53.4%
1	6065	43.9%
2	374	2.7%
Total	13821	100.0%

CMRPC-12: Household Income (Weighted) – INCOME

Household Income	Count	Percent
Less than $15,000	26570	12.5%
$15,000-$24,999	19385	9.1%
$25,000-$34,999	18150	8.5%
$35,000-$49,999	20415	9.6%
$50,000-$74,999	34498	16.2%
$75,000-$99,999	35708	16.8%
$100,000-$149,999	25559	12.0%
$150,000 or more	20671	9.7%
Don't Know/Refused	11769	5.5%
Total	212727	100.0%

CMRPC-13: Trips Made by Household on Travel Day (Weighted) – HTRIPS

Trips Made by Household on Travel Day	Count	Percent
None	10559	5.0%
1 to 5	69094	32.5%
6 to 10	62013	29.2%
11 to 15	29300	13.8%
16 to 20	20696	9.7%
21 to 30	16753	7.9%
31 to 50	3730	1.8%
50+	581	0.3%
Total	212727	100.0%

CMRPC-14: Household Students (Weighted) – HHSTU

Household Students	Count	Percent
0	127246	59.8%
1	34254	16.1%
2	33717	15.8%
3	13543	6.4%
4	3177	1.5%
5	791	0.4%
Total	212727	100.0%

CMRPC-15: Household Workers (Weighted) – HHWRK

Household Workers	Count	Percent
0	57033	26.8%
1	76306	35.9%
2	65413	30.7%
3	10505	4.9%
4	2840	1.3%
5	629	0.3%
Total	212727	100.0%

CMRPC-16: Licensed Drivers in Household (Weighted) –HHLIC

Licensed Drivers in Household	Count	Percent
0	13170	6.2%
1	68321	32.1%
2	105213	49.5%
3	17705	8.3%
4	6677	3.1%
5	1464	0.7%
6	177	0.1%
Total	212727	100.0%

CMRPC-17: Distribution of Households by Day of Week of Travel (Weighted) – DAY

Day of Week of Travel	Count	Percent
Monday	43263	20.3%
Tuesday	44185	20.8%
Wednesday	43575	20.5%
Thursday	40594	19.1%
Friday	41110	19.3%
Total	212727	100.0%

Person Characteristics

CMRPC-18: Respondent Gender (Weighted) – GEND

Respondent Gender	Count	Percent
Male	286069	48.7%
Female	300735	51.2%
Refused	117	0.0%
Total	586921	100.0%

CMRPC-19: Age Distribution (Weighted) – AGE

Age Distribution	Count	Percent
Younger than 20	164248	28.0%
20 to 34 years	116462	19.8%
35 to 54 years	173119	29.5%
55 to 64 years	54453	9.3%
65 years or older	68860	11.7%
Refused Age	9781	1.7%
Total	586921	100.0%

CMRPC-20: Valid Driver's License (Weighted)-LIC

Valid Driver's License	Count	Percent
Yes	384512	85.7%
No	64026	14.3%
Total	448538	100.0%

CMRPC-21: Respondent has Transit Pass (Weighted) – TRANS

Respondent has Transit Pass	Count	Percent
Yes	40773	9.1%
No	405512	90.4%
Don't Know	2253	0.5%
Total	448538	100.0%

CMRPC-22: Transit Pass Type (Weighted)-PASST1, PASST2, PASST3

Transit Pass Type, Multiple Response	Count	Percent
Local Bus Pass	12651	31.0%
Link Pass	856	2.1%
Commuter Rail Pass	4487	11.0%
Charlie Card	9750	23.9%
Other, specify	11820	29.0%
Don't Know	1209	3.0%
Total	40773	100.0%

CMRPC-23: Worker Status, Computed (Weighted) – WORKS

Worker Status, Computed	Count	Percent
Yes	263601	58.8%
No	184937	41.2%
Total	448538	100.0%

CMRPC-24: Employment Status, Non-workers (Weighted) – WKSTAT

Employment Status, Non workers	Count	Percent
Retired	62187	33.6%
Disabled/On Disability Status	31752	17.2%
Homemaker	27886	15.1%
Unemployed but looking for work	29384	15.9%
Unemployed and not looking for work	4471	2.4%
Student	27288	14.8%
Other, Specify	1120	0.6%
Refused	849	0.5%
Total	184937	100.0%

CMRPC-25: Average Number of Jobs (Weighted)-JOBS

Jobs	Average
Average Number of Jobs	1.11

CMRPC-26: Hours Worked per Day (Weighted) - HOURS

Hours Worked per Day	Count	Percent
1	769	0.3%
2	4705	1.8%
3	5651	2.1%
4	13260	5.0%
5	10884	4.1%
6	14897	5.7%
7	14772	5.6%
8	117499	44.6%
9	30125	11.4%
10	29092	11.0%
11	2844	1.1%
12	10926	4.1%
13	1251	0.5%
14	850	0.3%
16	1581	0.6%
20	431	0.2%
24	107	0.0%
Don't Know	2651	1.0%
Refused	1306	0.5%
Total	263601	100.0%

CMRPC-27: Respondent Average Number of Days Worked Per Week (Weighted) – WDAYS

Days Worked Per Week	Count	Percent
1	3493	1.3%
2	8675	3.3%
3	19254	7.3%
4	27390	10.4%
5	181843	69.0%
6	17212	6.5%
7	5475	2.1%
Don't Know	259	0.1%
Total	263601	100.0%

CMRPC-28: Telecommute Status (Weighted) - TELEW

Worker Telecommutes	Count	Percent
Yes	48166	18.3%
No	211673	80.3%
Don't Know	3763	1.4%
Total	263601	100.0%

CMRPC-29: Flexible Work Program Offered at Work (Weighted) – SCHED

Flexible Work Program Offered at Work	Count	Percent
Yes	55897	21.2%
No	196369	74.5%
Don't Know	11335	4.3%
Total	263601	100.0%

CMRPC-30: Type of Flexible Work Programs Offered, Multiple Response (Weighted)- FLEXP1, FLEXP2, FLEXP3

Type of Flexible Work Programs Offered, Multiple Response	Count	Percent
9/80 Work Period	3951	6.8%
Early Arrival/Departure	21594	36.9%
4/40 Work Week	5064	8.7%
Flexible Hours	14132	24.2%
Other, Specify	7867	13.5%
Don't Know	4635	7.9%
Refused	1211	2.1%
Total	58454	100.0%

CMRPC-31: Respondent Participates in Flexible Work Program (Weighted)-FLEXT

Respondent Participates in Flexible Work Program	Count	Percent
Yes	43993	78.7%
No	11377	20.4%
Don't Know	527	0.9%
Total	55897	100.0%

CMRPC-32: Disabled License Plate (Weighted)- EDISA

Disabled License Plate	Count	Percent
Yes	30321	5.5%
No	518726	94.4%
Don't Know	407	0.1%
Refused	280	0.1%
Total	549735	100.0%

CMRPC-33: Disabled Transit Registration (Weighted) –EDIS2

Disabled Transit Registration	Count	Percent
Yes	16646	3.0%
No	531597	96.7%
Don't Know	1212	0.2%
Refused	280	0.1%
Total	549735	100.0%

CMRPC-34: Level of Education Completed (Weighted) –EDUCA

Level of Education Completed	Count	Percent
Not a high school graduate, 12th grade or less. (Includes very young children)	178333	30.4%
High school graduate (high school diploma or GED)	99268	16.9%
Some college credit but no degree	50493	8.6%
Associate or technical school degree	42787	7.3%
Bachelor's or undergraduate degree	124235	21.2%
Graduate Degree (includes professional degrees, MD, DDs, JD)	88333	15.1%
Don't Know	2991	0.5%
Refused	481	0.1%
Total	586921	100.0%

CMRPC-35: School Enrollment Status (Weighted)-ENROL

School Enrollment Status	Count	Percent
Yes	177857	30.3%
No	408949	69.7%
Don't Know	115	0.0%
Total	586921	100.0%

CMRPC-36: Full-time / Part-time Student Status (Weighted)-FPTIM

Full-time / Part-time Student Status	Count	Percent
Part-time	32230	18.1%
Full-time	145305	81.7%
Don't Know	322	0.2%
Total	177857	100.0%

CMRPC-37: Student Grade Level Attends (Weighted)-SCHOL

Student Grade Level	Count	Percent
Daycare	5064	2.8%
Nursery School, Preschool	8143	4.6%
Kindergarten to Grade 8	89278	50.2%
Grade 9 to 12	37543	21.1%
Technical/Vocational School	2095	1.2%
Two-year college (community college)	10407	5.9%
4-year college or university	14322	8.1%
Graduate School/Professional	9964	5.6%
Don't Know/Refused	1041	0.6%
Total	177857	100.0%

CMRPC-38: Transit Trips Made in Past Week (Weighted)- TTRIP

Transit Trips Made in Past Week	Count	Percent
0	484348	82.5%
1	6842	1.2%
2	18496	3.2%
3	4048	0.7%
4	5394	0.9%
5	11509	2.0%
6	6649	1.1%
7	3320	0.6%
8	5282	0.9%
10	18935	3.2%
12	2329	0.4%
13	184	0.0%
14	4302	0.7%
15	2211	0.4%
16	118	0.0%
17	323	0.1%
18	755	0.1%
20	2159	0.4%
21	695	0.1%
25	499	0.1%
28	171	0.0%
30	561	0.1%
40	120	0.0%
50	169	0.0%
Don't Know	7340	1.3%
Refused	163	0.0%
Total	586921	100.0%

CMRPC-39: Bike Facilities Available at Work/School (Weighted)- BIKFA

Bike Facilities Available at Work/School	Count	Percent
Yes	149303	36.0%
No	200255	48.3%
Don't Know	58874	14.2%
Refused	6318	1.5%
Total	414750	100.0%

CMRPC-40: Days Used Bike for Recreation in Past Week (Weighted)- BIKD1

Days Used Bike for Recreation in Past Week	Count	Percent
0	264753	69.7%
1	17928	4.7%
2	10970	2.9%
3	7497	2.0%
4	3162	0.8%
5	1113	0.3%
6	1682	0.4%
7	2261	0.6%
Don't Know	46000	12.1%
Refused	24438	6.4%
Total	379804	100.0%

CMRPC-41: Days Used Bike for Transportation in Past Week (Weighted) – BIKD2

Days Used Bike for Transportation in Past Week	Count	Percent
0	295355	77.8%
1	3166	0.8%
2	3883	1.0%
3	2102	0.6%
4	1354	0.4%
5	1088	0.3%
6	0	0%
7	592	0.2%
Don't Know	47825	12.6%
Refused	24438	6.4%
Total	379804	100.0%

CMRPC-42: Bike Lanes/Trails Used (Weighted) – BIKRD

Bike Lanes/Trails Used for Non-Recreational Purposes	Count	Percent
Off-Road	45645	12.0%
On-Road	78498	20.7%
Both	69464	18.3%
Don't Know	147379	38.8%
Refused	38818	10.2%
Total	379804	100.0%

CMRPC-43: Internet was Used on Travel Day in Place of Trips (Weighted)-INUSE

Internet was used on Travel Day in Place of Trips	Count	Percent
Yes	31219	5.3%
No	527375	89.9%
Don't Know	27419	4.7%
Refused	908	0.2%
Total	586921	100.0%

CMRPC-44: Reason for Non-Travel (Weighted)-NOGO

Reason for Non-Travel	Count	Percent
Personally Sick	10763	13.0%
Caretaking Sick Kids	600	0.7%
Caretaking Sick Other	1561	1.9%
Homebound Elderly or Disabled	11180	13.5%
Worked at Home for Pay	2717	3.3%
Worked Around Home (Not for Pay)	23443	28.3%
Out of Area	3755	4.5%
Other, SPECIFY	28792	34.8%
Total	82810	100.0%

Vehicle Characteristics

CMRPC-45: Vehicle Year (Weighted) – YEAR

Vehicle Year	Count	Percent
1964 or older	1238	0.3%
1965-1979	3420	0.9%
1980-1989	4468	1.2%
1990-1999	61507	16.8%
2000-2003	96383	26.4%
2004-2006	95829	26.2%
2007	29033	7.9%
2008	27144	7.4%
2009	21932	6.0%
2010	19369	5.3%
2011	5223	1.4%
Total	365547	100.0%

CMRPC-46: Vehicle Make (Weighted) – MAKE

Vehicle Make	Count	Percent
Acura	3955	1.1%
Audi	2379	0.6%
BMW	4079	1.1%
Buick	6247	1.7%
Cadillac	2297	0.6%
Chevrolet	36877	9.9%
Chrysler	9564	2.6%
Dodge	18744	5.0%
Ford	46952	12.5%
Geo	1187	0.3%
GMC	5884	1.6%
Harley Davidson	2231	0.6%
Honda	36397	9.7%
Hummer	130	0.0%
Hyundai	10605	2.8%
Infiniti	748	0.2%
Isuzu	770	0.2%
Jaguar	730	0.2%
Jeep	10802	2.9%
Kawasaki	245	0.1%
Kia	3470	0.9%
Lexus	3932	1.1%
Lincoln	2068	0.6%
Mazda	7017	1.9%
Mercedes	2677	0.7%

Vehicle Make	Count	Percent
Mercury	7154	1.9%
Mitsubishi	2134	0.6%
Nissan	16239	4.3%
Oldsmobile	1475	0.4%
Plymouth	1890	0.5%
Pontiac	6994	1.9%
Porsche	143	0.0%
Range Rover	346	0.1%
Saab	4227	1.1%
Saturn	6085	1.6%
Scion	966	0.3%
Subaru	13855	3.7%
Suzuki	1112	0.3%
Toyota	64481	17.2%
Volkswagen	7790	2.1%
Volvo	9538	2.5%
Yamaha	1153	0.3%
Other, SPECIFY	5045	1.3%
Don't Know	2005	0.5%
Refused	1614	0.4%
Total	374235	100.0%

CMRPC-47: Vehicle Body Type (Weighted) – BODY

Vehicle Body Type	Count	Percent
Car/Station Wagon	192306	51.4%
Van (any type)	35374	9.5%
SUV	86493	23.1%
Pickup Truck	35116	9.4%
Other type of truck	890	0.2%
RV	615	0.2%
Motorcycle	5455	1.5%
Other, Specify	1309	0.3%
Refused	16676	4.5%
Total	374235	100.0%

CMRPC-48: Vehicle Fuel Type (Weighted) - FUEL

Vehicle Fuel Type	Count	Percent
Gas	366076	97.8%
Diesel	2662	0.7%
Hybrid	4771	1.3%
Flex Fuel	498	0.1%
Refused	228	0.1%
Total	374235	100.0%

Place Characteristics

CMRPC-49: Primary Trip Purpose (Weighted) – TPURP

Primary Trip Purpose	Count	Percent
All other home activities	1270065	46.2%
Work/Job	211602	7.7%
Routine shopping (groceries, clothing, convenience store, HH maintenance)	188966	6.9%
Changed type of transportation	157125	5.7%
Attending Class	105605	3.8%
Visit friends/relatives	96142	3.5%
Eat meal outside of home	95264	3.5%
Drop off passenger from car	80483	2.9%
Indoor recreation/entertainment	74892	2.7%
Household errands (bank, dry cleaning, etc.)	70316	2.6%
Pick up passenger from car	69690	2.5%
Personal business (visit government office, attorney, accountant)	65063	2.4%
Work Business Related	61663	2.2%
Health care (doctor, dentist)	55497	2.0%
Outdoor recreation/entertainment	33525	1.2%
Service private vehicle (gas, oil lube, etc.)	32610	1.2%
Shopping for major purchases or specialty items (appliance, electronics, new vehicle, major HH repairs)	21380	0.8%
Working at home (for pay)	18637	0.7%
Civic/Religious activities	17577	0.6%
All other School Activities	11949	0.4%
Loop trip	5436	0.2%
All other activities at work	5023	0.2%
Other, SPECIFY	2282	0.1%
Volunteer Work/Activities	874	0.0%
While Traveling -- Other, Specify	0	0.0%
Total	2751668	100.0%

CMRPC-50: Total People Traveling in Travel Party, Including Respondent (Weighted) – TOTTR

Total People Traveling	Count	Percent
1 person	1063702	52.1%
2 persons	557161	27.3%
3 persons	231185	11.3%
4 persons	120420	5.9%
5 persons	69012	3.4%
Total	2041481	100.0%

CMRPC-51: Parking Location (Weighted) – PRKTY

Parking Location	Count	Percent
Parking Lot	829502	47.9%
Parking Garage	38864	2.2%
Street	120289	6.9%
Driveway/personal garage	595416	34.4%
Did not park	138287	8.0%
Other, SPECIFY	2648	0.2%
Don't Know	4462	0.3%
Refused	2744	0.2%
Total	1732212	100.0%

CMRPC-52: Paid to Park (Weighted) – PRKCS

Paid to Park	Count	Percent
Did not Pay	1572804	90.8%
Did Pay, record amount	17419	1.0%
Don't Know	5961	0.3%
Refused	136028	7.9%
Total	1732212	100.0%

CMRPC-53: How Parking Fare was Paid (Weighted) – PRKHW

How Parking Fare was Paid	Count	Percent
Cash/Credit/Debit Card	12236	70.2%
Per-Paid parking Pass	3226	18.5%
Employer-Provided Parking Pass	1750	10.0%
Refused	207	1.2%
Total	17419	100.0%

CMRPC-54: Toll Road Used on Trip (Weighted) – TOLL (Use a Toll road)?

Use a Toll Road	Count	Percent
Yes	51135	3.0%
No	1655695	95.6%
Don't Know	23164	1.3%
Refused	2217	0.1%
Total	1732212	100.0%

CMRPC-55: Toll Road Used (Weighted) – TOLLT (Which Toll road was used)?

Which Toll Road was Used	Count	Percent
Turnpike	51021	99.8%
Sumner Tunnel	115	0.2%
Total	51135	100.0%

Travel Behavior

CMRPC-56: Average Household and Person Trip Rates (Weighted)

	Average Trip Rate
Household	10.6
Person	4.1

CMRPC-57: Trip Rates by Household Size (Weighted)

Household Size	Trip Rate
1	4.5
2	8.3
3	13.6
4	17.5
5	22.2
6	26.6
7	24.8
8 or more	29.8
Total	10.6

CMRPC-58: Trip Rates by Number of Household Workers (Weighted)

Household Workers	Trip Rate
0	6.6
1	9.7
2	13.1
3	16.8
4	22.0
5	27.2
6	22.7
Total	10.6

CMRPC-59: Trip Rates by Household Income (Weighted)

Household Income	Trip Rate
Less than $15,000	8.3
$15,000-$24,999	9.2
$25,000-$34,999	8.4
$35,000-$49,999	9.4
$50,000-$74,999	10.2
$75,000-$99,999	11.4
$100,000-$149,999	13.2
$150,000 or more	13.3
Don't Know/Refused	9.8
Total	10.6

CMRPC-60: All Trip Modes (Weighted)

Transportation Mode	Count	Percent
Walk	227090	10.5%
Bike	9113	0.4%
Auto/Van/Truck Driver	1232317	56.9%
Auto/Van/Truck Passenger	499355	23.1%
Public Bus	41608	1.9%
Train	26589	1.2%
Ferry/boat	181	0.0%
Dial-A-Ride/Paratransit	3103	0.1%
Taxi	12812	0.6%
School bus	110454	5.1%
Motorcycle Driver	539	0.0%
Other, SPECIFY	1587	0.1%
Total	2164747	100.0%

CMRPC-61: Mode to Work (Weighted)

Mode to Work	Count	Percent
Works from home	10800	4.1%
Walk	8388	3.2%
Bike	1279	0.5%
Auto/Van/Truck Driver	224279	85.1%
Auto/Van/Truck Passenger	6209	2.4%
Bus / Public Transit	8698	3.3%
Taxi	1843	0.7%
Motorcycle Driver	348	0.1%
Other, SPECIFY	974	0.4%
Don't Know	246	0.1%
Refused	536	0.2%
Total	263601	100.0%

CMRPC-62: Mode to School (Weighted)

Mode to School	Count	Percent
Home schooled	4438	2.5%
Walk	17955	10.1%
Bike	420	0.2%
Auto/Van/Truck Driver	24063	13.5%
Auto/Van/Truck Passenger	40784	22.9%
Bus / Public Transit	7111	4.0%
School Bus	78760	44.3%
Other, SPECIFY	1983	1.1%
Don't Know	1979	1.1%
Refused	364	0.2%
Total	177857	100.0%

Survey Results for Old Colony MPO (OCPC)

Household Characteristics

OCPC-1: Household Size (Weighted) – HHSIZ

Household Size	Count	Percent
1	28223	23.0%
2	38900	31.7%
3	24217	19.8%
4	18614	15.2%
5	9189	7.5%
6	3171	2.6%
7	224	0.2%
Total	122538	100.0%

OCPC-2: Transit Used on Regular Basis (Weighted) –RIBUS

Transit Used on Regular Basis	Count	Percent
Yes	24535	20.0%
No	98003	80.0%
Total	122538	100.0%

OCPC-3: Household Bicycles (Weighted) – HHBIC

Household Bicycles	Count	Percent
0	53331	43.5%
1	20933	17.1%
2	23165	18.9%
3	12100	9.9%
4	7713	6.3%
5	3470	2.8%
6	1301	1.1%
7	373	0.3%
8	154	0.1%
Total	122538	100.0%

OCPC-4: Household Number of Vehicles (Weighted)-HHVEH

Household Vehicles	Count	Percent
0	6860	5.6%
1	35951	29.3%
2	54452	44.4%
3	17162	14.0%
4	4281	3.5%
5	2487	2.0%
6	903	0.7%
7	224	0.2%
8 or More	218	0.2%
Total	122538	100.0%

OCPC-5: Household Ethnicity (Weighted)-RACE

Household Ethnicity	Count	Percent
White Alone	109909	89.7%
Black or African American Alone	6241	5.1%
American Indian or Alaskan Native Alone	434	0.4%
Asian Alone	645	0.5%
Some Other Race Alone	2877	2.3%
Two or More Races	1079	0.9%
Refused	1354	1.1%
Total	122538	100.0%

OCPC-6: Hispanic or Latino Households (Weighted) – HISP

Hispanic or Latino Household	Count	Percent
Yes	2197	1.8%
No	119599	97.6%
Refused	742	0.6%
Total	122538	100.0%

OCPC-7: Household Residence Type (Weighted)-RESTY

Household Residence Type	Count	Percent
Single Family Detached Dwelling	92922	75.8%
Building with 2-4 Units	14420	11.8%
Building with 5-19 Units	8269	6.7%
Building with 20 or More Units	6416	5.2%
or Something Else?	372	0.3%
Don't Know	140	0.1%
Total	122538	100.0%

OCPC-8: Ownership of Household Residence (Weighted) – OWN

Home Ownership	Count	Percent
Own/Mortgaged	101048	82.5%
Renter	21135	17.2%
Don't Know	356	0.3%
Total	122538	100.0%

OCPC-9: Cell phone lines in Household (Weighted) – CPLNS

Cell Phones in Household	Count	Percent
0	7865	6.4%
1	33533	27.4%
2	45098	36.8%
3	22356	18.2%
4	9877	8.1%
5	3080	2.5%
6	307	0.3%
Don't Know	423	0.3%
Total	122538	100.0%

OCPC-10: Landlines in Household (Weighted)-PHLNS

Landlines in Household	Count	Percent
0	1326	1.1%
1	113803	92.9%
2	6124	5.0%
3	1285	1.0%
Total	122538	100.0%

OCPC-11: Fax Lines in Household (Weighted) – FXLNS

Fax Lines in Household	Count	Percent
0	3888	52.5%
1	3521	47.5%
Total	7409	100.0%

OCPC-12: Household Income (Weighted) – INCOME

Household Income	Count	Percent
Less than $15,000	9984	8.1%
$15,000-$24,999	9672	7.9%
$25,000-$34,999	9866	8.1%
$35,000-$49,999	16205	13.2%
$50,000-$74,999	28345	23.1%
$75,000-$99,999	17861	14.6%
$100,000-$149,999	15604	12.7%
$150,000 or more	8946	7.3%
Don't Know/Refused	6055	4.9%
Total	122538	100.0%

OCPC-13: Trips Made by Household on Travel Day (Weighted) – HTRIPS

Trips Made by Household on Travel Day	Count	Percent
None	4686	3.8%
1 to 5	34818	28.4%
6 to 10	35478	29.0%
11 to 15	24780	20.2%
16 to 20	11898	9.7%
21 to 30	8917	7.3%
31 to 50	1961	1.6%
Total	122538	100.0%

OCPC-14: Household Students (Weighted) – HHSTU

Household Students	Count	Percent
0	78085	63.7%
1	20283	16.6%
2	14723	12.0%
3	7209	5.9%
4	1695	1.4%
5	544	0.4%
Total	122538	100.0%

OCPC-15: Household Workers (Weighted) – HHWRK

Household Workers	Count	Percent
0	27378	22.3%
1	42637	34.8%
2	40239	32.8%
3	9010	7.4%
4	2614	2.1%
5	659	0.5%
Total	122538	100.0%

OCPC-16: Licensed Drivers in Household (Weighted) –HHLIC

Licensed Drivers in Household	Count	Percent
0	3677	3.0%
1	36299	29.6%
2	61326	50.0%
3	14982	12.2%
4	5314	4.3%
5	722	0.6%
6	218	0.2%
Total	122538	100.0%

OCPC-17: Distribution of Households by Day of Week of Travel (Weighted) – DAY

Day of Week of Travel	Count	Percent
Monday	29920	24.4%
Tuesday	24728	20.2%
Wednesday	20807	17.0%
Thursday	24856	20.3%
Friday	22227	18.1%
Total	122538	100.0%

Person Characteristics

OCPC-18: Respondent Gender (Weighted) – GEND

Respondent Gender	Count	Percent
Male	156265	47.8%
Female	170849	52.2%
Total	327114	100.0%

OCPC-19: Age Distribution (Weighted) –AGE

Age Distribution	Count	Percent
Younger than 20	79832	24.4%
20 to 34 years	62887	19.2%
35 to 54 years	89387	27.3%
55 to 64 years	41513	12.7%
65 years or older	45423	13.9%
Refused Age	8073	2.5%
Total	327114	100.0%

OCPC-20: Valid Driver's License (Weighted)- LIC

Valid Driver's License	Count	Percent
Yes	233296	88.9%
No	29119	11.1%
Total	262415	100.0%

OCPC-21: Respondent has Transit Pass (Weighted) – TRANS

Respondent has Transit Pass	Count	Percent
Yes	36478	13.9%
No	224595	85.6%
Don't Know	1342	0.5%
Total	262415	100.0%

OCPC-22: Transit Pass Type (Weighted)- PASST1, PASST2, PASST3

Transit Pass Type, Multiple Response	Count	Percent
Local Bus Pass	3828	10.5%
Link Pass	1070	2.9%
Commuter Rail Pass	8445	23.2%
Charlie Card	17194	47.1%
Other, specify	5324	14.6%
Don't Know	245	0.7%
Refused	373	1.0%
Total	36478	100.0%

OCPC-23: Worker Status, Computed (Weighted) – WORKS

Worker Status, Computed	Count	Percent
Yes	169411	64.6%
No	93004	35.4%
Total	262415	100.0%

OCPC-24: Employment Status, Non-workers (Weighted) – WKSTAT

Employment Status, Non workers	Count	Percent
Retired	42538	45.7%
Disabled/On Disability Status	12648	13.6%
Homemaker	7921	8.5%
Unemployed but looking for work	13895	14.9%
Unemployed and not looking for work	2814	3.0%
Student	11776	12.7%
Other, SPECIFY	227	0.2%
Refused	1184	1.3%
Total	93004	100.0%

OCPC-25: Average Number of Jobs (Weighted)-JOBS

Jobs	Average
Average Number of Jobs	1.13

OCPC-26: Hours Worked per Day (Weighted) - HOURS

Hours Worked per Day	Count	Percent
1	679	0.4%
2	2172	1.3%
3	4833	2.9%
4	7211	4.3%
5	9971	5.9%
6	10117	6.0%
7	12716	7.5%
8	75593	44.6%
9	17212	10.2%
10	18326	10.8%
11	1339	0.8%
12	5311	3.1%
13	995	0.6%
14	431	0.3%
15	100	0.1%
16	372	0.2%
24	332	0.2%
Don't Know	1702	1.0%
Total	169411	100.0%

OCPC-27: Respondent Average Number of Days Worked Per Week (Weighted) – WDAYS

Days Worked Per Week	Count	Percent
1	2554	1.5%
2	8143	4.8%
3	14533	8.6%
4	19692	11.6%
5	112318	66.3%
6	9091	5.4%
7	2660	1.6%
Don't Know	419	0.2%
Total	169411	100.0%

OCPC-28: Telecommute Status (Weighted) - TELEW

Worker Telecommutes	Count	Percent
Yes	25037	14.8%
No	143291	84.6%
Don't Know	1083	0.6%
Total	169411	100.0%

OCPC-29: Flexible Work Program Offered at Work (Weighted) – SCHED

Flexible Work Program Offered at Work	Count	Percent
Yes	31724	18.7%
No	129197	76.3%
Don't Know	8490	5.0%
Total	169411	100.0%

OCPC-30: Type of Flexible Work Programs Offered, Multiple Response (Weighted)- FLEXP1, FLEXP2, FLEXP3

Type of Flexible Work Programs Offered, Multiple Response	Count	Percent
9/80 Work Period	1587	4.7%
Early Arrival/Departure	13837	41.3%
4/40 Work Week	4157	12.4%
Flexible Hours	6573	19.6%
Other, Specify	2222	6.6%
Don't Know	4646	13.9%
Refused	515	1.5%
Total	33536	100.0%

OCPC-31: Respondent Participates in Flexible Work Program (Weighted)-FLEXT

Respondent Participates in Flexible Work Program	Count	Percent
Yes	26619	83.9%
No	4095	12.9%
Don't Know	1010	3.2%
Total	31724	100.0%

OCPC-32: Disabled License Plate (Weighted)- EDISA

Disabled License Plate	Count	Percent
Yes	21575	7.0%
No	284957	92.5%
Don't Know	1102	0.4%
Refused	355	0.1%
Total	307989	100.0%

OCPC-33: Disabled Transit Registration (Weighted) –EDIS2

Disabled Transit Registration	Count	Percent
Yes	7565	2.5%
No	299710	97.3%
Don't Know	359	0.1%
Refused	355	0.1%
Total	307989	100.0%

OCPC-34: Level of Education Completed (Weighted) –EDUCA

Level of Education Completed	Count	Percent
Not a high school graduate, 12th grade or less. (Includes very young children)	86123	26.3%
High school graduate (high school diploma or GED)	68236	20.9%
Some college credit but no degree	42627	13.0%
Associate or technical school degree	32316	9.9%
Bachelor's or undergraduate degree	61128	18.7%
Graduate Degree (includes professional degrees, MD, DDs, JD)	35394	10.8%
Don't Know	1023	0.3%
Refused	267	0.1%
Total	327114	100.0%

OCPC-35: School Enrollment Status (Weighted)-ENROL

School Enrollment Status	Count	Percent
Yes	88608	27.1%
No	238065	72.8%
Don't Know	441	0.1%
Total	327114	100.0%

OCPC-36: Full-time / Part-time Student Status (Weighted)-FPTIM

Full-time / Part-time Student Status	Count	Percent
Part-time	19919	22.5%
Full-time	68689	77.5%
Total	88608	100.0%

OCPC-37: Student Grade Level Attends (Weighted)-SCHOL

Student Grade Level	Count	Percent
Daycare	2999	3.4%
Nursery School, Preschool	3589	4.1%
Kindergarten to Grade 8	41484	46.8%
Grade 9 to 12	18738	21.1%
Technical/Vocational School	1294	1.5%
Two-year college (community college)	5412	6.1%
4-year college or university	11397	12.9%
Graduate School/Professional	2588	2.9%
Don't Know/Refused	1108	1.3%
Total	88608	100.0%

OCPC-38: Transit Trips Made in Past Week (Weighted)- TTRIP

Transit Trips Made in Past Week	Count	Percent
0	263838	80.7%
1	5825	1.8%
2	15320	4.7%
3	1979	0.6%
4	4229	1.3%
5	4354	1.3%
6	4064	1.2%
7	936	0.3%
8	2402	0.7%
9	373	0.1%
10	14733	4.5%
12	378	0.1%
14	2303	0.7%
15	220	0.1%
16	675	0.2%
20	1135	0.3%
28	485	0.1%
Don't Know	3159	1.0%
Refused	706	0.2%
Total	327114	100.0%

OCPC-39: Bike Facilities Available at Work/School (Weighted)- BIKFA

Bike Facilities Available at Work/School	Count	Percent
Yes	85940	35.8%
No	115568	48.1%
Don't Know	33244	13.8%
Refused	5438	2.3%
Total	240190	100.0%

OCPC-40: Days Used Bike for Recreation in Past Week (Weighted)- BIKD1

Days Used Bike for Recreation in Past Week	Count	Percent
0	150718	70.8%
1	12473	5.9%
2	5551	2.6%
3	2672	1.3%
4	779	0.4%
5	899	0.4%
6	0	0%
7	1907	0.9%
Don't Know	23245	10.9%
Refused	14606	6.9%
Total	212850	100.0%

OCPC-41: Days Used Bike for Transportation in Past Week (Weighted) – BIKD2

Days Used Bike for Transportation in Past Week	Count	Percent
0	168735	79.3%
1	2235	1.0%
2	983	0.5%
3	783	0.4%
4	0	0%
5	448	0.2%
6	0	0%
7	803	0.4%
Don't Know	23825	11.2%
Refused	15039	7.1%
Total	212850	100.0%

OCPC-42: Bike Lanes/Trails Used (Weighted) – BIKRD

Bike Lanes/Trails Used for Non-Recreational Purposes	Count	Percent
Off-Road	23043	10.8%
On-Road	45034	21.2%
Both	38809	18.2%
Don't Know	85740	40.3%
Refused	20224	9.5%
Total	212850	100.0%

OCPC-43: Internet was Used on Travel Day in Place of Trips (Weighted)-INUSE

Internet was used on Travel Day in Place of Trips	Count	Percent
Yes	10783	3.3%
No	297970	91.1%
Don't Know	17513	5.4%
Refused	848	0.3%
Total	327114	100.0%

OCPC-44: Reason for Non-Travel (Weighted)-NOGO

Reason for Non-Travel	Count	Percent
Personally Sick	6299	15.0%
Caretaking Sick Kids	234	0.6%
Homebound Elderly or Disabled	5981	14.2%
Worked at Home for Pay	1421	3.4%
Worked Around Home (Not for Pay)	12203	29.1%
Out of Area	542	1.3%
Other, SPECIFY	15300	36.4%
Total	41980	100.0%

Vehicle Characteristics

OCPC-45: Vehicle Year (Weighted) – YEAR

Vehicle Year	Count	Percent
1964 or older	534	0.2%
1965-1979	1910	0.8%
1980-1989	3833	1.7%
1990-1999	42222	18.5%
2000-2003	63858	28.0%
2004-2006	53063	23.3%
2007	17262	7.6%
2008	16386	7.2%
2009	12246	5.4%
2010	13958	6.1%
2011	2692	1.2%
Total	227966	100.0%

OCPC-46: Vehicle Make (Weighted) – MAKE

Vehicle Make	Count	Percent
Acura	2025	0.9%
Audi	963	0.4%
BMW	2540	1.1%
Buick	6008	2.6%
Cadillac	2897	1.2%
Chevrolet	23619	10.1%
Chrysler	6157	2.6%
Dodge	11630	5.0%
Ford	31181	13.3%
Geo	399	0.2%
GMC	3660	1.6%
Harley Davidson	4564	1.9%
Honda	16992	7.2%
Hyundai	7390	3.1%
Infiniti	912	0.4%
Isuzu	1084	0.5%
Jaguar	106	0.0%
Jeep	9956	4.2%
Kawasaki	1019	0.4%
Kia	4810	2.1%
Lexus	3048	1.3%
Lincoln	1670	0.7%
Mazda	3928	1.7%

Vehicle Make	Count	Percent
Mercedes	1544	0.7%
Mercury	4211	1.8%
Mitsubishi	1646	0.7%
Nissan	11939	5.1%
Oldsmobile	2273	1.0%
Plymouth	960	0.4%
Pontiac	6384	2.7%
Porsche	218	0.1%
Range Rover	424	0.2%
Saab	733	0.3%
Saturn	2835	1.2%
Scion	564	0.2%
Subaru	6084	2.6%
Suzuki	443	0.2%
Toyota	37781	16.1%
Volkswagen	2026	0.9%
Volvo	3830	1.6%
Yamaha	295	0.1%
Other, SPECIFY	2326	1.0%
Don't Know	1299	0.6%
Refused	255	0.1%
Total	234627	100.0%

OCPC-47: Vehicle Body Type (Weighted) – BODY

Vehicle Body Type	Count	Percent
Car/Station Wagon	114773	48.9%
Van (any type)	19409	8.3%
SUV	54748	23.3%
Pickup Truck	25941	11.1%
Other type of truck	154	0.1%
RV	357	0.2%
Motorcycle	5384	2.3%
Refused	13861	5.9%
Total	234627	100.0%

OCPC-48: Vehicle Fuel Type (Weighted) - FUEL

Vehicle Fuel Type	Count	Percent
Gas	230665	98.3%
Diesel	902	0.4%
Hybrid	2650	1.1%
Flex Fuel	410	0.2%
Total	234627	100.0%

Place Characteristics

OCPC-49: Primary Trip Purpose (Weighted) – TPURP

Primary Trip Purpose	Count	Percent
All other home activities	719472	45.6%
Work/Job	125343	7.9%
Routine shopping (groceries, clothing, convenience store, HH maintenance)	119776	7.6%
Changed type of transportation	109407	6.9%
Attending Class	53783	3.4%
Eat meal outside of home	47791	3.0%
Drop off passenger from car	46212	2.9%
Visit friends/relatives	44858	2.8%
Household errands (bank, dry cleaning, etc.)	44162	2.8%
Pick up passenger from car	40854	2.6%
Work Business Related	39767	2.5%
Health care (doctor, dentist)	34893	2.2%
Personal business (visit government office, attorney, accountant)	32630	2.1%
Indoor recreation/entertainment	32080	2.0%
Outdoor recreation/entertainment	26036	1.7%
Service private vehicle (gas, oil lube, etc.)	18600	1.2%
Working at home (for pay)	10945	0.7%
Civic/Religious activities	9085	0.6%
All other activities at work	7378	0.5%
Shopping for major purchases or specialty items (appliance, electronics, new vehicle, major HH repairs)	6027	0.4%
All other School Activities	4258	0.3%
Other, SPECIFY	1749	0.1%
Volunteer Work/Activities	1053	0.1%
Loop trip	947	0.1%
While Traveling -- Other, Specify	0	0.0%
Total	1577103	100.0%

OCPC-50: Total People Traveling in Travel Party, Including Respondent (Weighted) – TOTTR

Total People Traveling	Count	Percent
1 person	703625	58.5%
2 persons	301711	25.1%
3 persons	131882	11.0%
4 persons	52184	4.3%
5 persons	13532	1.1%
Total	1202935	100.0%

OCPC-51: Parking Location (Weighted) – PRKTY

Parking Location	Count	Percent
Parking Lot	507222	48.7%
Parking Garage	18860	1.8%
Street	48129	4.6%
Driveway/personal garage	377961	36.3%
Did not park	73289	7.0%
Other, SPECIFY	4855	0.5%
Don't Know	9872	0.9%
Refused	900	0.1%
Total	1041087	100.0%

OCPC-52: Paid to Park (Weighted) – PRKCS

Paid to Park	Count	Percent
Did not Pay	948083	91.1%
Did Pay, record amount	14927	1.4%
Don't Know	3186	0.3%
Refused	74893	7.2%
Total	1041087	100.0%

OCPC-53: How Parking Fare was Paid (Weighted) – PRKHW

How Parking Fare was Paid	Count	Percent
Cash/Credit/Debit Card	13448	90.1%
Per-Paid parking Pass	1479	9.9%
Employer-Provided Parking Pass	0	0%
Total	14927	100.0%

OCPC-54: Toll Road Used on Trip (Weighted) – TOLL (Use a Toll road)?

Use a Toll Road	Count	Percent
Yes	3374	0.3%
No	987779	94.9%
Don't Know	44951	4.3%
Refused	4983	0.5%
Total	1041087	100.0%

OCPC-55: Toll Road Used (Weighted) – TOLLT (Which Toll road was used)?

Which Toll Road was Used	Count	Percent
Turnpike	2209	65.5%
Tobin Bridge	1165	34.5%
Total	3374	100.0%

Travel Behavior

OCPC-56: Average Household and Person Trip Rates (Weighted)

	Average Trip Rate
Household	10.6
Person	4.1

OCPC-57: Trip Rates by Household Size (Weighted)

Household Size	Trip Rate
1	4.5
2	8.3
3	13.6
4	17.5
5	22.2
6	26.6
7	24.8
8 or more	29.8
Total	10.6

OCPC-58: Trip Rates by Number of Household Workers (Weighted)

Household Workers	Trip Rate
0	6.6
1	9.7
2	13.1
3	16.8
4	22.0
5	27.2
6	22.7
Total	10.6

OCPC-59: Trip Rates by Household Income (Weighted)

Household Income	Trip Rate
Less than $15,000	8.3
$15,000-$24,999	9.2
$25,000-$34,999	8.4
$35,000-$49,999	9.4
$50,000-$74,999	10.2
$75,000-$99,999	11.4
$100,000-$149,999	13.2
$150,000 or more	13.3
Don't Know/Refused	9.8
Total	10.6

OCPC-60: All Trip Modes (Weighted)

Transportation Mode	Count	Percent
Walk	99606	8.0%
Bike	3503	0.3%
Auto/Van/Truck Driver	772264	61.8%
Auto/Van/Truck Passenger	266132	21.3%
Public Bus	24385	2.0%
Train	30025	2.4%
Dial-A-Ride/Paratransit	2796	0.2%
Taxi	2164	0.2%
School bus	44891	3.6%
Motorcycle Driver	2691	0.2%
Other, SPECIFY	1532	0.1%
Total	1249989	100.0%

OCPC-61: Mode to Work (Weighted)

Mode to Work	Count	Percent
Works from home	5357	3.2%
Walk	3502	2.1%
Bike	1007	0.6%
Auto/Van/Truck Driver	135998	80.3%
Auto/Van/Truck Passenger	7945	4.7%
Bus / Public Transit	12393	7.3%
Taxi	150	0.1%
Motorcycle Driver	287	0.2%
Other, SPECIFY	2184	1.3%
Don't Know	213	0.1%
Refused	373	0.2%
Total	169411	100.0%

OCPC-62: Mode to School (Weighted)

Mode to School	Count	Percent
Home schooled	1462	1.7%
Walk	7912	8.9%
Auto/Van/Truck Driver	16052	18.1%
Auto/Van/Truck Passenger	23436	26.4%
Bus / Public Transit	4249	4.8%
Dial-A-Ride/Paratransit	235	0.3%
School Bus	34594	39.0%
Other, SPECIFY	149	0.2%
Don't Know	517	0.6%
Total	88608	100.0%

Survey Results for Merrimack Valley MPO (MVPC)

Household Characteristics

MVPC-1: Household Size (Weighted) – HHSIZ

Household Size	Count	Percent
1	31904	25.9%
2	35989	29.2%
3	21323	17.3%
4	23940	19.4%
5	8892	7.2%
6	1046	0.8%
Total	123094	100.0%

MVPC-2: Transit Used on Regular Basis (Weighted) –RIBUS

Transit Used on Regular Basis	Count	Percent
Yes	23192	18.8%
No	99676	81.0%
Don't Know	226	0.2%
Total	123094	100.0%

MVPC-3: Household Bicycles (Weighted) – HHBIC

Household Bicycles	Count	Percent
0	57727	46.9%
1	20467	16.6%
2	17077	13.9%
3	10378	8.4%
4	10474	8.5%
5	3648	3.0%
6	1877	1.5%
7	663	0.5%
8	783	0.6%
Total	123094	100.0%

MVPC-4: Household Number of Vehicles (Weighted)-HHVEH

Household Vehicles	Count	Percent
0	14893	12.1%
1	40823	33.2%
2	47444	38.5%
3	13050	10.6%
4	4733	3.8%
5	1786	1.5%
6	211	0.2%
7	154	0.1%
Total	123094	100.0%

MVPC-5: Household Ethnicity (Weighted)-RACE

Household Ethnicity	Count	Percent
White Alone	102933	83.6%
Black or African American Alone	932	0.8%
American Indian or Alaskan Native Alone	516	0.4%
Asian Alone	1972	1.6%
Some Other Race Alone	13920	11.3%
Two or More Races	1862	1.5%
Refused	959	0.8%
Total	123094	100.0%

MVPC-6: Hispanic or Latino Households (Weighted) – HISP

Hispanic or Latino Household	Count	Percent
Yes	20548	16.7%
No	102036	82.9%
Refused	509	0.4%
Total	123094	100.0%

MVPC-7: Household Residence Type (Weighted)-RESTY

Household Residence Type	Count	Percent
Single Family Detached Dwelling	76701	62.3%
Building with 2-4 Units	25689	20.9%
Building with 5-19 Units	10503	8.5%
Building with 20 or More Units	9748	7.9%
or Something Else?	453	0.4%
Total	123094	100.0%

MVPC-8: Ownership of Household Residence (Weighted) – OWN

Home Ownership	Count	Percent
Own/Mortgaged	86440	70.2%
Renter	36408	29.6%
Other, Specify	246	0.2%
Total	123094	100.0%

MVPC-9: Cell phone lines in Household (Weighted) – CPLNS

Cell Phones in Household	Count	Percent
0	12993	10.6%
1	36689	29.8%
2	38961	31.7%
3	18020	14.6%
4	13362	10.9%
5	2380	1.9%
6	373	0.3%
Don't Know	316	0.3%
Total	123094	100.0%

MVPC-10: Landlines in Household (Weighted)-PHLNS

Landlines in Household	Count	Percent
0	326	0.3%
1	113679	92.4%
2	7611	6.2%
3	748	0.6%
4	305	0.2%
5	212	0.2%
Don't Know	211	0.2%
Total	123094	100.0%

MVPC-11: Fax Lines in Household (Weighted) – FXLNS

Fax Lines in Household	Count	Percent
0	3983	43.8%
1	4679	51.5%
Don't Know	427	4.7%
Total	9089	100.0%

MVPC-12: Household Income (Weighted) – INCOME

Household Income	Count	Percent
Less than $15,000	20781	16.9%
$15,000-$24,999	9644	7.8%
$25,000-$34,999	8776	7.1%
$35,000-$49,999	13112	10.7%
$50,000-$74,999	17933	14.6%
$75,000-$99,999	15825	12.9%
$100,000-$149,999	14717	12.0%
$150,000 or more	16790	13.6%
Don't Know/Refused	5518	4.5%
Total	123094	100.0%

MVPC-13: Trips Made by Household on Travel Day (Weighted) – HTRIPS

Trips Made by Household on Travel Day	Count	Percent
None	6079	4.9%
1 to 5	39423	32.0%
6 to 10	35100	28.5%
11 to 15	20351	16.5%
16 to 20	12167	9.9%
21 to 30	7548	6.1%
31 to 50	2426	2.0%
Total	123094	100.0%

MVPC-14: Household Students (Weighted) – HHSTU

Household Students	Count	Percent
0	70548	57.3%
1	23669	19.2%
2	18921	15.4%
3	8828	7.2%
4	1127	0.9%
Total	123094	100.0%

MVPC-15: Household Workers (Weighted) – HHWRK

Household Workers	Count	Percent
0	32237	26.2%
1	44877	36.5%
2	36220	29.4%
3	7083	5.8%
4	1993	1.6%
5	686	0.6%
Total	123094	100.0%

MVPC-16: Licensed Drivers in Household (Weighted) –HHLIC

Licensed Drivers in Household	Count	Percent
0	9893	8.0%
1	39769	32.3%
2	57613	46.8%
3	10763	8.7%
4	4629	3.8%
5	427	0.3%
Total	123094	100.0%

MVPC-17: Distribution of Households by Day of Week of Travel (Weighted) – DAY

Day of Week of Travel	Count	Percent
Monday	28245	22.9%
Tuesday	22990	18.7%
Wednesday	25856	21.0%
Thursday	19051	15.5%
Friday	26952	21.9%
Total	123094	100.0%

Person Characteristics

MVPC-18: Respondent Gender (Weighted) – GEND

Respondent Gender	Count	Percent
Male	167622	47.9%
Female	182262	52.1%
Total	349884	100.0%

MVPC-19: Age Distribution (Weighted) –AGE

Age Distribution	Count	Percent
Younger than 20	95140	27.2%
20 to 34 years	69369	19.8%
35 to 54 years	99155	28.3%
55 to 64 years	36721	10.5%
65 years or older	44006	12.6%
Refused Age	5493	1.6%
Total	349884	100.0%

MVPC-20: Valid Driver's License (Weighted)- LIC

Valid Driver's License	Count	Percent
Yes	219798	79.7%
No	54722	19.8%
Refused	1197	0.4%
Total	275718	100.0%

MVPC-21: Respondent has Transit Pass (Weighted) – TRANS

Respondent has Transit Pass	Count	Percent
Yes	28749	10.4%
No	244962	88.8%
Don't Know	1312	0.5%
Refused	694	0.3%
Total	275718	100.0%

MVPC-22: Transit Pass Type (Weighted)- PASST1, PASST2, PASST3

Transit Pass Type, Multiple Response	Count	Percent
Local Bus Pass	3497	12.2%
Link Pass	399	1.4%
Commuter Rail Pass	4208	14.6%
Charlie Card	11906	41.4%
Other, specify	6002	20.9%
Don't Know	2737	9.5%
Total	28749	100.0%

MVPC-23: Worker Status, Computed (Weighted) – WORKS

Worker Status, Computed	Count	Percent
Yes	159771	57.9%
No	115946	42.1%
Total	275718	100.0%

MVPC-24: Employment Status, Non-workers (Weighted) – WKSTAT

Employment Status, Non workers	Count	Percent
Retired	35133	30.3%
Disabled/On Disability Status	21898	18.9%
Homemaker	14446	12.5%
Unemployed but looking for work	17853	15.4%
Unemployed and not looking for work	1539	1.3%
Student	23906	20.6%
Other, SPECIFY	89	0.1%
Refused	1083	0.9%
Total	115946	100.0%

MVPC-25: Average Number of Jobs (Weighted)-JOBS

Jobs	Average
Average Number of Jobs	1.09

MVPC-26: Hours Worked per Day (Weighted) - HOURS

Hours Worked per Day	Count	Percent
1	337	0.2%
2	2313	1.4%
3	2954	1.8%
4	13296	8.3%
5	10459	6.5%
6	10917	6.8%
7	8297	5.2%
8	69128	43.3%
9	13926	8.7%
10	16874	10.6%
11	921	0.6%
12	4765	3.0%
13	112	0.1%
14	92	0.1%
15	353	0.2%
16	188	0.1%
24	422	0.3%
Don't Know	3512	2.2%
Refused	906	0.6%
Total	159771	100.0%

MVPC-27: Respondent Average Number of Days Worked Per Week (Weighted) – WDAYS

Days Worked Per Week	Count	Percent
1	1729	1.1%
2	5868	3.7%
3	13645	8.5%
4	15768	9.9%
5	106435	66.6%
6	10448	6.5%
7	4734	3.0%
Don't Know	1145	0.7%
Total	159771	100.0%

MVPC-28: Telecommute Status (Weighted) - TELEW

Worker Telecommutes	Count	Percent
Yes	30194	18.9%
No	127166	79.6%
Don't Know	2184	1.4%
Refused	228	0.1%
Total	159771	100.0%

MVPC-29: Flexible Work Program Offered at Work (Weighted) – SCHED

Flexible Work Program Offered at Work	Count	Percent
Yes	33598	21.0%
No	118619	74.2%
Don't Know	7327	4.6%
Refused	228	0.1%
Total	159771	100.0%

MVPC-30: Type of Flexible Work Programs Offered, Multiple Response (Weighted)- FLEXP1, FLEXP2, FLEXP3

Type of Flexible Work Programs Offered, Multiple Response	Count	Percent
9/80 Work Period	1887	5.4%
Early Arrival/Departure	16069	45.6%
4/40 Work Week	2838	8.1%
Flexible Hours	5298	15.0%
Other, Specify	4650	13.2%
Don't Know	3511	10.0%
Refused	982	2.8%
Total	35236	100.0%

MVPC-31: Respondent Participates in Flexible Work Program (Weighted)-FLEXT

Respondent Participates in Flexible Work Program	Count	Percent
Yes	27861	82.9%
No	5179	15.4%
Don't Know	558	1.7%
Total	33598	100.0%

MVPC-32: Disabled License Plate (Weighted)- EDISA

Disabled License Plate	Count	Percent
Yes	15210	4.6%
No	315603	95.4%
Total	330813	100.0%

MVPC-33: Disabled Transit Registration (Weighted) –EDIS2

Disabled Transit Registration	Count	Percent
Yes	8099	2.4%
No	322288	97.4%
Don't Know	426	0.1%
Total	330813	100.0%

MVPC-34: Level of Education Completed (Weighted) –EDUCA

Level of Education Completed	Count	Percent
Not a high school graduate, 12th grade or less. (Includes very young children)	113863	32.5%
High school graduate (high school diploma or GED)	61064	17.5%
Some college credit but no degree	32842	9.4%
Associate or technical school degree	24510	7.0%
Bachelor's or undergraduate degree	64553	18.4%
Graduate Degree (includes professional degrees, MD, DDs, JD)	50373	14.4%
Other, SPECIFY	457	0.1%
Don't Know	2088	0.6%
Refused	136	0.0%
Total	349884	100.0%

MVPC-35: School Enrollment Status (Weighted)-ENROL

School Enrollment Status	Count	Percent
Yes	112391	32.1%
No	237493	67.9%
Total	349884	100.0%

MVPC-36: Full-time / Part-time Student Status (Weighted)-FPTIM

Full-time / Part-time Student Status	Count	Percent
Part-time	17268	15.4%
Full-time	95123	84.6%
Total	112391	100.0%

MVPC-37: Student Grade Level Attends (Weighted)-SCHOL

Student Grade Level	Count	Percent
Daycare	2944	2.6%
Nursery School, Preschool	5510	4.9%
Kindergarten to Grade 8	45581	40.6%
Grade 9 to 12	29373	26.1%
Technical/Vocational School	1667	1.5%
Two-year college (community college)	9687	8.6%
4-year college or university	13450	12.0%
Graduate School/Professional	3563	3.2%
Don't Know/Refused	617	0.5%
Total	112391	100.0%

MVPC-38: Transit Trips Made in Past Week (Weighted)- TTRIP

Transit Trips Made in Past Week	Count	Percent
0	282765	80.8%
1	6640	1.9%
2	11465	3.3%
3	4109	1.2%
4	7493	2.1%
5	4045	1.2%
6	5547	1.6%
7	1682	0.5%
8	3717	1.1%
9	122	0.0%
10	9987	2.9%
12	1265	0.4%
14	3600	1.0%
15	290	0.1%
20	648	0.2%
30	669	0.2%
42	230	0.1%
Don't Know	5544	1.6%
Refused	66	0.0%
Total	349884	100.0%

MVPC-39: Bike Facilities Available at Work/School (Weighted)- BIKFA

Bike Facilities Available at Work/School	Count	Percent
Yes	103236	41.3%
No	109828	44.0%
Don't Know	33816	13.5%
Refused	2864	1.1%
Total	249744	100.0%

MVPC-40: Days Used Bike for Recreation in Past Week (Weighted)- BIKD1

Days Used Bike for Recreation in Past Week	Count	Percent
0	144995	66.9%
1	13341	6.2%
2	13514	6.2%
3	4844	2.2%
4	4087	1.9%
5	1245	0.6%
6	1051	0.5%
7	1488	0.7%
Don't Know	17157	7.9%
Refused	14939	6.9%
Total	216661	100.0%

MVPC-41: Days Used Bike for Transportation in Past Week (Weighted) – BIKD2

Days Used Bike for Transportation in Past Week	Count	Percent
0	168650	77.8%
1	3483	1.6%
2	2284	1.1%
3	4095	1.9%
4	2226	1.0%
5	605	0.3%
6	114	0.1%
7	619	0.3%
Don't Know	19703	9.1%
Refused	14882	6.9%
Total	216661	100.0%

MVPC-42: Bike Lanes/Trails Used (Weighted) – BIKRD

Bike Lanes/Trails Used for Non-Recreational Purposes	Count	Percent
Off-Road	12627	5.8%
On-Road	54661	25.2%
Both	48767	22.5%
Don't Know	78345	36.2%
Refused	22261	10.3%
Total	216661	100.0%

MVPC-43: Internet was Used on Travel Day in Place of Trips (Weighted)-INUSE

Internet was used on Travel Day in Place of Trips	Count	Percent
Yes	19759	5.6%
No	311074	88.9%
Don't Know	18085	5.2%
Refused	967	0.3%
Total	349884	100.0%

MVPC-44: Reason for Non-Travel (Weighted)-NOGO

Reason for Non-Travel	Count	Percent
Personally Sick	7224	13.8%
Caretaking Sick Kids	1936	3.7%
Caretaking Sick Other	1011	1.9%
Homebound Elderly or Disabled	7850	15.0%
Worked at Home for Pay	1713	3.3%
Worked Around Home (Not for Pay)	13814	26.5%
Out of Area	2661	5.1%
Other, SPECIFY	15962	30.6%
Total	52169	100.0%

Vehicle Characteristics

MVPC-45: Vehicle Year (Weighted) – YEAR

Vehicle Year	Count	Percent
1964 or older	73	0.0%
1965-1979	1957	1.0%
1980-1989	3245	1.6%
1990-1999	36654	18.2%
2000-2003	55112	27.4%
2004-2006	46849	23.3%
2007	14543	7.2%
2008	12450	6.2%
2009	14041	7.0%
2010	12437	6.2%
2011	4052	2.0%
Total	201412	100.0%

MVPC-46: Vehicle Make (Weighted) – MAKE

Vehicle Make	Count	Percent
Acura	4320	2.1%
Audi	2622	1.3%
BMW	3956	1.9%
Buick	2677	1.3%
Cadillac	2823	1.4%
Chevrolet	13405	6.5%
Chrysler	5289	2.6%
Dodge	10123	4.9%
Ford	26491	12.9%
GMC	2816	1.4%
Harley Davidson	1166	0.6%
Honda	28510	13.9%
Hummer	180	0.1%
Hyundai	4707	2.3%
Infiniti	1642	0.8%
Isuzu	638	0.3%
Jaguar	451	0.2%
Jeep	4188	2.0%
Kawasaki	566	0.3%
Kia	2305	1.1%
Lexus	2682	1.3%
Lincoln	1233	0.6%
Mazda	2482	1.2%
Mercedes	2559	1.2%
Mercury	2547	1.2%
Mitsubishi	3197	1.6%
Nissan	6370	3.1%
Oldsmobile	1323	0.6%
Plymouth	886	0.4%

Pontiac	2577	1.3%
Porsche	538	0.3%
Range Rover	274	0.1%
Saab	2807	1.4%
Saturn	3477	1.7%
Scion	611	0.3%
Subaru	6981	3.4%
Suzuki	794	0.4%
Toyota	30385	14.8%
Volkswagen	5757	2.8%
Volvo	5419	2.6%
Yamaha	263	0.1%
Other, SPECIFY	2081	1.0%
Don't Know	948	0.5%
Total	205063	100.0%

MVPC-47: Vehicle Body Type (Weighted) – BODY

Vehicle Body Type	Count	Percent
Car/Station Wagon	102688	50.1%
Van (any type)	18562	9.1%
SUV	48590	23.7%
Pickup Truck	16354	8.0%
Other type of truck	363	0.2%
Motorcycle	2591	1.3%
Other, SPECIFY	504	0.2%
Refused	15412	7.5%
Total	205063	100.0%

MVPC-48: Vehicle Fuel Type (Weighted) - FUEL

Vehicle Fuel Type	Count	Percent
Gas	198728	96.9%
Diesel	2907	1.4%
Hybrid	2558	1.2%
Flex Fuel	759	0.4%
Don't Know	111	0.1%
Total	205063	100.0%

Place Characteristics

MVPC-49: Primary Trip Purpose (Weighted) – TPURP

Primary Trip Purpose	Count	Percent
All other home activities	748587	46.7%
Changed type of transportation	122442	7.6%
Work/Job	121981	7.6%
Routine shopping (groceries, clothing, convenience store, HH maintenance)	103210	6.4%
Attending Class	63513	4.0%
Visit friends/relatives	53548	3.3%
Eat meal outside of home	46292	2.9%
Drop off passenger from car	43304	2.7%
Health care (doctor, dentist)	40026	2.5%
Pick up passenger from car	39453	2.5%
Household errands (bank, dry cleaning, etc.)	36911	2.3%
Work Business Related	35425	2.2%
Indoor recreation/entertainment	34514	2.2%
Personal business (visit government office, attorney, accountant)	30194	1.9%
Outdoor recreation/entertainment	22885	1.4%
Service private vehicle (gas, oil lube, etc.)	17001	1.1%
Working at home (for pay)	12834	0.8%
Civic/Religious activities	12262	0.8%
Shopping for major purchases or specialty items (appliance, electronics, new vehicle, major HH repairs)	6254	0.4%
All other School Activities	5065	0.3%
All other activities at work	3099	0.2%
Loop trip	2563	0.2%
Other, SPECIFY	1317	0.1%
Volunteer Work/Activities	346	0.0%
While Traveling -- Other, Specify	0	0.0%
Total	1603025	100.0%

MVPC-50: Total People Traveling in Travel Party, Including Respondent (Weighted) – TOTTR

Total People Traveling	Count	Percent
1 person	644657	55.0%
2 persons	314851	26.9%
3 persons	141988	12.1%
4 persons	55268	4.7%
5 persons	14832	1.3%
Total	1171597	100.0%

MVPC-51: Parking Location (Weighted) – PRKTY

Parking Location	Count	Percent
Parking Lot	418222	44.6%
Parking Garage	16217	1.7%
Street	70822	7.5%
Driveway/personal garage	327679	34.9%
Did not park	95233	10.1%
Other, SPECIFY	3333	0.4%
Don't Know	6797	0.7%
Refused	325	0.0%
Total	938629	100.0%

MVPC-52: Paid to Park (Weighted) – PRKCS

Paid to Park	Count	Percent
Did not Pay	831349	88.6%
Did Pay, record amount	8777	0.9%
Don't Know	4626	0.5%
Refused	93877	10.0%
Total	938629	100.0%

MVPC-53: How Parking Fare was Paid (Weighted) – PRKHW

How Parking Fare was Paid	Count	Percent
Cash/Credit/Debit Card	7487	85.3%
Per-Paid parking Pass	1017	11.6%
Employer-Provided Parking Pass	274	3.1%
Total	8777	100.0%

MVPC-54: Toll Road Used on Trip (Weighted) – TOLL (Use a Toll road)?

Use a Toll Road	Count	Percent
Yes	7111	0.8%
No	900455	95.9%
Don't Know	30425	3.2%
Refused	638	0.1%
Total	938629	100.0%

MVPC-55: Toll Road Used (Weighted) – TOLLT (Which Toll road was used)?

Which Toll Road was Used	Count	Percent
Turnpike	4017	56.5%
Ted Williams Tunnel	283	4.0%
Sumner Tunnel	713	10.0%
Tobin Tunnel	2099	29.5%
Total	7111	100.0%

MVPC-56: Average Household and Person Trip Rates (Weighted)

	Average Trip Rate
Household	10.6
Person	4.1

MVPC-57: Trip Rates by Household Size (Weighted)

Household Size	Trip Rate
1	4.5
2	8.3
3	13.6
4	17.5
5	22.2
6	26.6
7	24.8
8 or more	29.8
Total	10.6

MVPC-58: Trip Rates by Number of Household Workers (Weighted)

Household Workers	Trip Rate
0	6.6
1	9.7
2	13.1
3	16.8
4	22.0
5	27.2
6	22.7
Total	10.6

MVPC-59: Trip Rates by Household Income (Weighted)

Household Income	Trip Rate
Less than $15,000	8.3
$15,000-$24,999	9.2
$25,000-$34,999	8.4
$35,000-$49,999	9.4
$50,000-$74,999	10.2
$75,000-$99,999	11.4
$100,000-$149,999	13.2
$150,000 or more	13.3
Don't Know/Refused	9.8
Total	10.6

MVPC-60: All Trip Modes (Weighted)

Transportation Mode	Count	Percent
Walk	160631	12.8%
Bike	5863	0.5%
Auto/Van/Truck Driver	673166	53.7%
Auto/Van/Truck Passenger	264544	21.1%
Public Bus	39638	3.2%
Train	18524	1.5%
Ferry/boat	540	0.0%
Dial-A-Ride/Paratransit	3726	0.3%
Taxi	30199	2.4%
School bus	51533	4.1%
Motorcycle Driver	317	0.0%
Motorcycle Passenger	603	0.0%
Other, SPECIFY	4047	0.3%
Total	1253329	100.0%

MVPC-61: Mode to Work (Weighted)

Mode to Work	Count	Percent
Works from home	9509	6.0%
Walk	6001	3.8%
Bike	524	0.3%
Auto/Van/Truck Driver	119968	75.1%
Auto/Van/Truck Passenger	10014	6.3%
Bus / Public Transit	10144	6.3%
Dial-A-Ride/Paratransit	606	0.4%
Taxi	1038	0.6%
Other, SPECIFY	1376	0.9%
Don't Know	591	0.4%
Total	159771	100.0%

MVPC-62: Mode to School (Weighted)

Mode to School	Count	Percent
Home schooled	180	0.2%
Walk	15390	13.7%
Bike	530	0.5%
Auto/Van/Truck Driver	19653	17.5%
Auto/Van/Truck Passenger	31481	28.0%
Bus / Public Transit	5282	4.7%
Dial-A-Ride/Paratransit	314	0.3%
School Bus	37659	33.5%
Other, SPECIFY	1361	1.2%
Don't Know	541	0.5%
Total	112391	100.0%

Survey Results for Northern Middlesex MPO (NMCOG)

Household Characteristics

NMCOG-1: Household Size (Weighted) – HHSIZ

Household Size	Count	Percent
1	24142	24.0%
2	29693	29.5%
3	19731	19.6%
4	18600	18.5%
5	6745	6.7%
6	828	0.8%
7	781	0.8%
8 or More	204	0.2%
Total	100723	100.0%

NMCOG-2: Transit Used on Regular Basis (Weighted) –RIBUS

Transit Used on Regular Basis	Count	Percent
Yes	15202	15.1%
No	85521	84.9%
Total	100723	100.0%

NMCOG-3: Household Bicycles (Weighted) – HHBIC

Household Bicycles	Count	Percent
0	41193	40.9%
1	14153	14.1%
2	19840	19.7%
3	10431	10.4%
4	9182	9.1%
5	3248	3.2%
6	1038	1.0%
7	662	0.7%
8	864	0.9%
Don't Know	112	0.1%
Total	100723	100.0%

NMCOG-4: Household Number of Vehicles (Weighted)-HHVEH

Household Vehicles	Count	Percent
0	7340	7.3%
1	25321	25.1%
2	46228	45.9%
3	14410	14.3%
4	5263	5.2%
5	1141	1.1%
6	877	0.9%
7	144	0.1%
Total	100723	100.0%

NMCOG-5: Household Ethnicity (Weighted)-RACE

Household Ethnicity	Count	Percent
White Alone	92876	92.2%
Black or African American Alone	1672	1.7%
American Indian or Alaskan Native Alone	139	0.1%
Asian Alone	2563	2.5%
Some Other Race Alone	1435	1.4%
Two or More Races	899	0.9%
Refused	1138	1.1%
Total	100723	100.0%

NMCOG-6: Hispanic or Latino Households (Weighted) – HISP

Hispanic or Latino Household	Count	Percent
Yes	2164	2.1%
No	98197	97.5%
Refused	362	0.4%
Total	100723	100.0%

NMCOG-7: Household Residence Type (Weighted)-RESTY

Household Residence Type	Count	Percent
Single Family Detached Dwelling	73967	73.4%
Building with 2-4 Units	10930	10.9%
Building with 5-19 Units	7564	7.5%
Building with 20 or More Units	7372	7.3%
or Something Else?	303	0.3%
DK	406	0.4%
RF	182	0.2%
Total	100723	100.0%

NMCOG-8: Ownership of Household Residence (Weighted) – OWN

Home Ownership	Count	Percent
Own/Mortgaged	83736	83.1%
Renter	16805	16.7%
Refused	182	0.2%
Total	100723	100.0%

NMCOG-9: Cell phone lines in Household (Weighted) – CPLNS

Cell Phones in Household	Count	Percent
0	7327	7.3%
1	23366	23.2%
2	38411	38.1%
3	16569	16.4%
4	11703	11.6%
5	2775	2.8%
6	389	0.4%
Refused	182	0.2%
Total	100723	100.0%

NMCOG-10: Landlines in Household (Weighted)-PHLNS

Landlines in Household	Count	Percent
0	723	0.7%
1	91883	91.2%
2	6866	6.8%
3	1069	1.1%
Refused	182	0.2%
Total	100723	100.0%

NMCOG-11: Fax Lines in Household (Weighted) – FXLNS

Fax Lines in Household	Count	Percent
0	4146	51.1%
1	3789	46.7%
Refused	182	2.2%
Total	8117	100.0%

NMCOG-12: Household Income (Weighted) – INCOME

Household Income	Count	Percent
Less than $15,000	9021	9.0%
$15,000-$24,999	6652	6.6%
$25,000-$34,999	7248	7.2%
$35,000-$49,999	11193	11.1%
$50,000-$74,999	16727	16.6%
$75,000-$99,999	20408	20.3%
$100,000-$149,999	13480	13.4%
$150,000 or more	11172	11.1%
Don't Know/Refused	4822	4.8%
Total	100723	100.0%

NMCOG-13: Trips Made by Household on Travel Day (Weighted) – HTRIPS

Trips Made by Household on Travel Day	Count	Percent
None	3994	4.0%
1 to 5	30709	30.5%
6 to 10	28732	28.5%
11 to 15	17230	17.1%
16 to 20	9936	9.9%
21 to 30	8678	8.6%
31 to 50	1248	1.2%
50+	196	0.2%
Total	100723	100.0%

NMCOG-14: Household Students (Weighted) – HHSTU

Household Students	Count	Percent
0	59522	59.1%
1	16732	16.6%
2	17175	17.1%
3	5335	5.3%
4	1598	1.6%
5	361	0.4%
Total	100723	100.0%

NMCOG-15: Household Workers (Weighted) – HHWRK

Household Workers	Count	Percent
0	22140	22.0%
1	36223	36.0%
2	32336	32.1%
3	8034	8.0%
4	1889	1.9%
6	102	0.1%
Total	100723	100.0%

NMCOG-16: Licensed Drivers in Household (Weighted) –HHLIC

Licensed Drivers in Household	Count	Percent
0	5305	5.3%
1	27257	27.1%
2	49376	49.0%
3	14295	14.2%
4	3662	3.6%
5	828	0.8%
Total	100723	100.0%

NMCOG-17: Distribution of Households by Day of Week of Travel (Weighted) – DAY

Day of Week of Travel	Count	Percent
Monday	21389	21.2%
Tuesday	20475	20.3%
Wednesday	16960	16.8%
Thursday	20506	20.4%
Friday	21393	21.2%
Total	100723	100.0%

Person Characteristics

NMCOG-18: Respondent Gender (Weighted) – GEND

Respondent Gender	Count	Percent
Male	127322	47.6%
Female	139958	52.4%
Total	267280	100.0%

NMCOG-19: Age Distribution (Weighted) – AGE

Age Distribution	Count	Percent
Younger than 20	73978	27.7%
20 to 34 years	47683	17.8%
35 to 54 years	82093	30.7%
55 to 64 years	29346	11.0%
65 years or older	28918	10.8%
Refused Age	5262	2.0%
Total	267280	100.0%

NMCOG-20: Valid Driver's License (Weighted)-LIC

Valid Driver's License	Count	Percent
Yes	189429	89.7%
No	21681	10.3%
Total	211110	100.0%

NMCOG-21: Respondent has Transit Pass (Weighted) – TRANS

Respondent has Transit Pass	Count	Percent
Yes	25938	12.3%
No	184668	87.5%
Don't Know	504	0.2%
Total	211110	100.0%

NMCOG-22: Transit Pass Type (Weighted)-PASST1, PASST2, PASST3

Transit Pass Type, Multiple Response	Count	Percent
Local Bus Pass	2245	8.7%
Link Pass	676	2.6%
Inner Express Bus Pass	629	2.4%
Outer Express Bus Pass	82	0.3%
Commuter Rail Pass	2970	11.4%
Charlie Card	14731	56.8%
Other, specify	3495	13.5%
Don't Know	928	3.6%
Refused	183	0.7%
Total	25938	100.0%

NMCOG-23: Worker Status, Computed (Weighted) – WORKS

Worker Status, Computed	Count	Percent
Yes	133818	63.4%
No	77292	36.6%
Total	211110	100.0%

NMCOG-24: Employment Status, Non-workers (Weighted) – WKSTAT

Employment Status, Non workers	Count	Percent
Retired	26591	34.4%
Disabled/On Disability Status	9334	12.1%
Homemaker	9352	12.1%
Unemployed but looking for work	12291	15.9%
Unemployed and not looking for work	1716	2.2%
Student	17515	22.7%
Refused	494	0.6%
Total	77292	100.0%

NMCOG-25: Average Number of Jobs (Weighted)-JOBS

Jobs	Average
Average Number of Jobs	1.81

NMCOG-26: Hours Worked per Day (Weighted) - HOURS

Hours Worked per Day	Count	Percent
1	1288	1.0%
2	2063	1.5%
3	2816	2.1%
4	5793	4.3%
5	6018	4.5%
6	8471	6.3%
7	7845	5.9%
8	59267	44.3%
9	15841	11.8%
10	14307	10.7%
11	1463	1.1%
12	4887	3.7%
13	119	0.1%
14	168	0.1%
15	137	0.1%
16	163	0.1%
18	258	0.2%
20	147	0.1%
24	112	0.1%
Don't Know	902	0.7%
Refused	1751	1.3%
Total	133818	100.0%

NMCOG-27: Respondent Average Number of Days Worked Per Week (Weighted) – WDAYS

Days Worked Per Week	Count	Percent
1	3072	2.3%
2	4528	3.4%
3	8912	6.7%
4	10557	7.9%
5	97046	72.5%
6	7290	5.4%
7	1971	1.5%
Don't Know	163	0.1%
Refused	278	0.2%
Total	133818	100.0%

NMCOG-28: Telecommute Status (Weighted) - TELEW

Worker Telecommutes	Count	Percent
Yes	26842	20.1%
No	102328	76.5%
Don't Know	4370	3.3%
Refused	278	0.2%
Total	133818	100.0%

NMCOG-29: Flexible Work Program Offered at Work (Weighted) – SCHED

Flexible Work Program Offered at Work	Count	Percent
Yes	33338	24.9%
No	93655	70.0%
Don't Know	6480	4.8%
Refused	344	0.3%
Total	133818	100.0%

NMCOG-30: Type of Flexible Work Programs Offered, Multiple Response (Weighted)- FLEXP1, FLEXP2, FLEXP3

Type of Flexible Work Programs Offered, Multiple Response	Count	Percent
9/80 Work Period	3516	10.4%
Early Arrival/Departure	11521	34.1%
4/40 Work Week	1794	5.3%
Flexible Hours	7950	23.5%
Other, Specify	3762	11.1%
Don't Know	3822	11.3%
Refused	1401	4.1%
Total	33766	100.0%

NMCOG-31: Respondent Participates in Flexible Work Program (Weighted)-FLEXT

Respondent Participates in Flexible Work Program	Count	Percent
Yes	26993	81.0%
No	5586	16.8%
Don't Know	759	2.3%
Total	33338	100.0%

NMCOG-32: Disabled License Plate (Weighted)- EDISA

Disabled License Plate	Count	Percent
Yes	11474	4.6%
No	236961	94.3%
Don't Know	1656	0.7%
Refused	1139	0.5%
Total	251230	100.0%

NMCOG-33: Disabled Transit Registration (Weighted) –EDIS2

Disabled Transit Registration	Count	Percent
Yes	4166	1.7%
No	245636	97.8%
Don't Know	290	0.1%
Refused	1139	0.5%
Total	251230	100.0%

NMCOG-34: Level of Education Completed (Weighted) –EDUCA

Level of Education Completed	Count	Percent
Not a high school graduate, 12th grade or less. (Includes very young children)	73717	27.6%
High school graduate (high school diploma or GED)	48713	18.2%
Some college credit but no degree	28312	10.6%
Associate or technical school degree	22226	8.3%
Bachelor's or undergraduate degree	52159	19.5%
Graduate Degree (includes professional degrees, MD, DDs, JD)	41463	15.5%
Other, SPECIFY	258	0.1%
Don't Know	432	0.2%
Total	267280	100.0%

NMCOG-35: School Enrollment Status (Weighted)-ENROL

School Enrollment Status	Count	Percent
Yes	83059	31.1%
No	184221	68.9%
Total	267280	100.0%

NMCOG-36: Full-time / Part-time Student Status (Weighted)-FPTIM

Full-time / Part-time Student Status	Count	Percent
Part-time	14699	17.7%
Full-time	68289	82.2%
Refused	71	0.1%
Total	83059	100.0%

NMCOG-37: Student Grade Level Attends (Weighted)-SCHOL

Student Grade Level	Count	Percent
Daycare	2235	2.7%
Nursery School, Preschool	3735	4.5%
Kindergarten to Grade 8	33021	39.8%
Grade 9 to 12	21807	26.3%
Technical/Vocational School	726	0.9%
Two-year college (community college)	4547	5.5%
4-year college or university	11533	13.9%
Graduate School/Professional	5007	6.0%
Other, SPECIFY	337	0.4%
Don't Know/Refused	112	0.1%
Total	83059	100.0%

NMCOG-38: Transit Trips Made in Past Week (Weighted)- TTRIP

Transit Trips Made in Past Week	Count	Percent
0	217605	81.4%
1	3498	1.3%
2	11100	4.2%
3	1274	0.5%
4	5369	2.0%
5	2060	0.8%
6	2258	0.8%
7	1006	0.4%
8	1727	0.6%
9	93	0.0%
10	10449	3.9%
12	1009	0.4%
14	1165	0.4%
15	914	0.3%
16	455	0.2%
17	403	0.2%
20	1113	0.4%
24	217	0.1%
25	135	0.1%
28	243	0.1%
30	919	0.3%
52	124	0.0%
60	148	0.1%
Don't Know	3147	1.2%
Refused	848	0.3%
Total	267280	100.0%

NMCOG-39: Bike Facilities Available at Work/School (Weighted)- BIKFA

Bike Facilities Available at Work/School	Count	Percent
Yes	76830	38.7%
No	89304	45.0%
Don't Know	29053	14.6%
Refused	3408	1.7%
Total	198595	100.0%

NMCOG-40: Days Used Bike for Recreation in Past Week (Weighted)- BIKD1

Days Used Bike for Recreation in Past Week	Count	Percent
0	131515	71.5%
1	10826	5.9%
2	6158	3.3%
3	4450	2.4%
4	2555	1.4%
5	1098	0.6%
6	92	0.0%
7	1289	0.7%
Don't Know	14273	7.8%
Refused	11792	6.4%
Total	184048	100.0%

NMCOG-41: Days Used Bike for Transportation in Past Week (Weighted) – BIKD2

Days Used Bike for Transportation in Past Week	Count	Percent
0	151362	82.2%
1	1852	1.0%
2	1788	1.0%
3	855	0.5%
4	492	0.3%
5	151362	82.2%
6	0	0%
7	636	0.3%
Don't Know	15505	8.4%
Refused	11557	6.3%
Total	184048	100.0%

NMCOG-42: Bike Lanes/Trails Used (Weighted) – BIKRD

Bike Lanes/Trails Used for Non-Recreational Purposes	Count	Percent
Off-Road	28503	15.5%
On-Road	38765	21.1%
Both	42457	23.1%
Don't Know	54879	29.8%
Refused	19444	10.6%
Total	184048	100.0%

NMCOG-43: Internet was Used on Travel Day in Place of Trips (Weighted)-INUSE

Internet was used on Travel Day in Place of Trips	Count	Percent
Yes	13190	4.9%
No	238656	89.3%
Don't Know	14778	5.5%
Refused	655	0.2%
Total	267280	100.0%

NMCOG-44: Reason for Non-Travel (Weighted)-NOGO

Reason for Non-Travel	Count	Percent
Personally Sick	6049	18.3%
Caretaking Sick Kids	408	1.2%
Caretaking Sick Other	211	0.6%
Homebound Elderly or Disabled	4357	13.2%
Worked at Home for Pay	2079	6.3%
Worked Around Home (Not for Pay)	9984	30.2%
Out of Area	3149	9.5%
Other, SPECIFY	6873	20.8%
Total	33110	100.0%

Vehicle Characteristics

NMCOG-45: Vehicle Year (Weighted) – YEAR

Vehicle Year	Count	Percent
1964 or older	113	0.1%
1965-1979	1537	0.8%
1980-1989	3636	1.9%
1990-1999	35812	19.0%
2000-2003	48833	25.9%
2004-2006	47009	24.9%
2007	14998	8.0%
2008	15146	8.0%
2009	8277	4.4%
2010	10321	5.5%
2011	2839	1.5%
Total	188520	100.0%

NMCOG-46: Vehicle Make (Weighted) – MAKE

Vehicle Make	Count	Percent
Acura	2163	1.1%
Audi	504	0.3%
BMW	2448	1.3%
Buick	5228	2.7%
Cadillac	2056	1.1%
Chevrolet	15180	7.8%
Chrysler	4773	2.5%
Dodge	8479	4.4%
Ford	23711	12.2%
GMC	1856	1.0%
Harley Davidson	2722	1.4%
Honda	23525	12.1%
Hummer	141	0.1%
Hyundai	4071	2.1%
Infiniti	763	0.4%
Isuzu	635	0.3%
Jaguar	242	0.1%
Jeep	5739	3.0%
Kawasaki	436	0.2%
Kia	2465	1.3%
Lexus	2566	1.3%
Lincoln	972	0.5%
Mazda	3497	1.8%

Vehicle Make	Count	Percent
Mercedes	802	0.4%
Mercury	4520	2.3%
Mitsubishi	102	0.1%
Nissan	6602	3.4%
Oldsmobile	757	0.4%
Pontiac	2621	1.4%
Porsche	144	0.1%
Saab	806	0.4%
Saturn	6805	3.5%
Scion	577	0.3%
Subaru	5406	2.8%
Suzuki	1446	0.7%
Toyota	38922	20.1%
Volkswagen	3215	1.7%
Volvo	3935	2.0%
Yamaha	355	0.2%
Other, SPECIFY	1934	1.0%
Don't Know	912	0.5%
Total	194031	100.0%

NMCOG-47: Vehicle Body Type (Weighted) – BODY

Vehicle Body Type	Count	Percent
Car/Station Wagon	99393	51.2%
Van (any type)	14306	7.4%
SUV	46968	24.2%
Pickup Truck	19604	10.1%
Other type of truck	669	0.3%
RV	241	0.1%
Motorcycle	4317	2.2%
Refused	8533	4.4%
Total	194031	100.0%

NMCOG-48: Vehicle Fuel Type (Weighted) - FUEL

Vehicle Fuel Type	Count	Percent
Gas	188549	97.2%
Diesel	1737	0.9%
Hybrid	2523	1.3%
Flex Fuel	375	0.2%
Other, SPECIFY	304	0.2%
Don't Know	544	0.3%
Total	194031	100.0%

Place Characteristics

NMCOG-49: Primary Trip Purpose (Weighted) – TPURP

Primary Trip Purpose	Count	Percent
All other home activities	592512	46.6%
Work/Job	100789	7.9%
Routine shopping (groceries, clothing, convenience store, HH maintenance)	83520	6.6%
Changed type of transportation	71400	5.6%
Attending Class	49260	3.9%
Visit friends/relatives	39771	3.1%
Eat meal outside of home	38937	3.1%
Indoor recreation/entertainment	35991	2.8%
Drop off passenger from car	35140	2.8%
Household errands (bank, dry cleaning, etc.)	34045	2.7%
Pick up passenger from car	31108	2.4%
Work Business Related	30335	2.4%
Personal business (visit government office, attorney, accountant)	30332	2.4%
Outdoor recreation/entertainment	25071	2.0%
Health care (doctor, dentist)	23528	1.8%
Service private vehicle (gas, oil lube, etc.)	12486	1.0%
Shopping for major purchases or specialty items (appliance, electronics, new vehicle, major HH repairs)	9432	0.7%
Working at home (for pay)	8054	0.6%
Civic/Religious activities	6472	0.5%
Loop trip	4722	0.4%
All other School Activities	3698	0.3%
All other activities at work	3363	0.3%
Other, SPECIFY	1720	0.1%
Volunteer Work/Activities	202	0.0%
While Traveling -- Other, Specify	0	0.0%
Total	1271888	100.0%

NMCOG-50: Total People Traveling in Travel Party, Including Respondent (Weighted) – TOTTR

Total People Traveling	Count	Percent
1 person	542257	56.7%
2 persons	222294	23.2%
3 persons	102167	10.7%
4 persons	54269	5.7%
5 persons	35798	3.7%
Total	956785	100.0%

NMCOG-51: Parking Location (Weighted) – PRKTY

Parking Location	Count	Percent
Parking Lot	411281	49.5%
Parking Garage	13096	1.6%
Street	41700	5.0%
Driveway/personal garage	290909	35.0%
Did not park	64728	7.8%
Other, SPECIFY	997	0.1%
Don't Know	7505	0.9%
Refused	375	0.0%
Total	830591	100.0%

NMCOG-52: Paid to Park (Weighted) – PRKCS

Paid to Park	Count	Percent
Did not Pay	751417	90.5%
Did Pay, record amount	10151	1.2%
Don't Know	4178	0.5%
Refused	64845	7.8%
Total	830591	100.0%

NMCOG-53: How Parking Fare was Paid (Weighted) – PRKHW

How Parking Fare was Paid	Count	Percent
Cash/Credit/Debit Card	6589	64.9%
Per-Paid parking Pass	2825	27.8%
Employer-Provided Parking Pass	738	7.3%
Total	10151	100.0%

NMCOG-54: Toll Road Used on Trip (Weighted) – TOLL (Use a Toll road)?

Use a Toll Road	Count	Percent
Yes	5099	0.6%
No	814647	98.1%
Don't Know	10470	1.3%
Refused	375	0.0%
Total	830591	100.0%

NMCOG-55: Toll Road Used (Weighted) – TOLLT (Which Toll road was used)?

Which Toll Road was Used	Count	Percent
Turnpike	5015	98.4%
Sumner Tunnel	84	1.6%
Total	5099	100.0%

Travel Behavior

NMCOG-56: Average Household and Person Trip Rates (Weighted)

	Average Trip Rate
Household	10.6
Person	4.1

NMCOG-57: Trip Rates by Household Size (Weighted)

Household Size	Trip Rate
1	4.5
2	8.3
3	13.6
4	17.5
5	22.2
6	26.6
7	24.8
8 or more	29.8
Total	10.6

NMCOG-58: Trip Rates by Number of Household Workers (Weighted)

Household Workers	Trip Rate
0	6.6
1	9.7
2	13.1
3	16.8
4	22.0
5	27.2
6	22.7
Total	10.6

NMCOG-59: Trip Rates by Household Income (Weighted)

Household Income	Trip Rate
Less than $15,000	8.3
$15,000-$24,999	9.2
$25,000-$34,999	8.4
$35,000-$49,999	9.4
$50,000-$74,999	10.2
$75,000-$99,999	11.4
$100,000-$149,999	13.2
$150,000 or more	13.3
Don't Know/Refused	9.8
Total	10.6

NMCOG-60: All Trip Modes (Weighted)

Transportation Mode	Count	Percent
Walk	84623	8.4%
Bike	6162	0.6%
Auto/Van/Truck Driver	610735	60.8%
Auto/Van/Truck Passenger	219269	21.8%
Public Bus	19212	1.9%
Train	12801	1.3%
Ferry/boat	795	0.1%
Dial-A-Ride/Paratransit	581	0.1%
Taxi	1016	0.1%
School bus	46808	4.7%
Motorcycle Driver	586	0.1%
Other, SPECIFY	2020	0.2%
Total	1004608	100.0%

NMCOG-61: Mode to Work (Weighted)

Mode to Work	Count	Percent
Works from home	8224	6.1%
Walk	2077	1.6%
Bike	289	0.2%
Auto/Van/Truck Driver	111578	83.4%
Auto/Van/Truck Passenger	5470	4.1%
Bus / Public Transit	3782	2.8%
Dial-A-Ride/Paratransit	406	0.3%
Taxi	118	0.1%
Other, SPECIFY	1197	0.9%
Don't Know	421	0.3%
Refused	256	0.2%
Total	133818	100.0%

NMCOG-62: Mode to School (Weighted)

Mode to School	Count	Percent
Home schooled	1651	2.0%
Walk	5113	6.2%
Bike	145	0.2%
Auto/Van/Truck Driver	18094	21.8%
Auto/Van/Truck Passenger	21388	25.7%
Bus / Public Transit	2423	2.9%
School Bus	33708	40.6%
Other, SPECIFY	349	0.4%
Don't Know	188	0.2%
Total	83059	100.0%

Survey Results for Cape Cod MPO (CCC)

Household Characteristics

CCC-1: Household Size (Weighted) – HHSIZ

Household Size	Count	Percent
1	34620	35.3%
2	40043	40.8%
3	10595	10.8%
4	8742	8.9%
5	3155	3.2%
6	152	0.2%
7	656	0.7%
8 or More	201	0.2%
Total	98164	100.0%

CCC-2: Transit Used on Regular Basis (Weighted) –RIBUS

Transit Used on Regular Basis	Count	Percent
Yes	10748	10.9%
No	87416	89.1%
Total	98164	100.0%

CCC-3: Household Bicycles (Weighted) – HHBIC

Household Bicycles	Count	Percent
0	38266	39.0%
1	17137	17.5%
2	21338	21.7%
3	8568	8.7%
4	7783	7.9%
5	2410	2.5%
6	1703	1.7%
7	319	0.3%
8	424	0.4%
Don't Know	217	0.2%
Total	98164	100.0%

CCC-4: Household Number of Vehicles (Weighted)-HHVEH

Household Vehicles	Count	Percent
0	5608	5.7%
1	38330	39.0%
2	39889	40.6%
3	9531	9.7%
4	3635	3.7%
5	878	0.9%
6	293	0.3%
Total	98164	100.0%

CCC-5: Household Ethnicity (Weighted)-RACE

Household Ethnicity	Count	Percent
White Alone	93554	95.3%
Black or African American Alone	780	0.8%
Asian Alone	211	0.2%
Some Other Race Alone	904	0.9%
Two or More Races	816	0.8%
Refused	1900	1.9%
Total	98164	100.0%

CCC-6: Hispanic or Latino Households (Weighted) – HISP

Hispanic or Latino Household	Count	Percent
Yes	1813	1.8%
No	95219	97.0%
RF	1132	1.2%
Total	98164	100.0%

CCC-7: Household Residence Type (Weighted)-RESTY

Household Residence Type	Count	Percent
Single Family Detached Dwelling	82372	83.9%
Building with 2-4 Units	7477	7.6%
Building with 5-19 Units	3619	3.7%
Building with 20 or More Units	3952	4.0%
or Something Else?	527	0.5%
RF	217	0.2%
Total	98164	100.0%

CCC-8: Ownership of Household Residence (Weighted) – OWN

Home Ownership	Count	Percent
Own/Mortgaged	81985	83.5%
Renter	15330	15.6%
Other, Specify	337	0.3%
DK	512	0.5%
Total	98164	100.0%

CCC-9: Cell phone lines in Household (Weighted) – CPLNS

Cell Phones in Household	Count	Percent
0	7330	7.5%
1	36804	37.5%
2	35444	36.1%
3	9349	9.5%
4	6915	7.0%
5	1442	1.5%
6	116	0.1%
Don't Know	627	0.6%
Refused	138	0.1%
Total	98164	100.0%

CCC-10: Landlines in Household (Weighted)-PHLNS

Landlines in Household	Count	Percent
0	182	0.2%
1	88260	89.9%
2	7219	7.4%
3	1893	1.9%
4	231	0.2%
5	0	0%
6	195	0.2%
7	0	0%
8	0	0%
9	0	0%
10	184	0.2%
Total	98164	100.0%

CCC-11: Fax Lines in Household (Weighted) – FXLNS

Fax Lines in Household	Count	Percent
0	3401	35.0%
1	5845	60.1%
2	130	1.3%
Don't Know	346	3.6%
Total	9722	100.0%

CCC-12: Household Income (Weighted) – INCOME

Household Income	Count	Percent
Less than $15,000	11965	12.2%
$15,000-$24,999	10236	10.4%
$25,000-$34,999	12532	12.8%
$35,000-$49,999	13473	13.7%
$50,000-$74,999	15240	15.5%
$75,000-$99,999	13316	13.6%
$100,000-$149,999	9880	10.1%
$150,000 or more	7408	7.5%
Don't Know/Refused	4113	4.2%
Total	98164	100.0%

CCC-13: Trips Made by Household on Travel Day (Weighted) – HTRIPS

Trips Made by Household on Travel Day	Count	Percent
None	9393	9.6%
1 to 5	30265	30.8%
6 to 10	31790	32.4%
11 to 15	14410	14.7%
16 to 20	6608	6.7%
21 to 30	4902	5.0%
31 to 50	796	0.8%
Total	98164	100.0%

CCC-14: Household Students (Weighted) – HHSTU

Household Students	Count	Percent
0	77083	78.5%
1	10918	11.1%
2	6729	6.9%
3	2776	2.8%
4	457	0.5%
5	201	0.2%
Total	98164	100.0%

CCC-15: Household Workers (Weighted) – HHWRK

Household Workers	Count	Percent
0	39360	40.1%
1	30671	31.2%
2	21100	21.5%
3	5779	5.9%
4	1103	1.1%
5	151	0.2%
Total	98164	100.0%

CCC-16: Licensed Drivers in Household (Weighted) –HHLIC

Licensed Drivers in Household	Count	Percent
0	4489	4.6%
1	37684	38.4%
2	46240	47.1%
3	6493	6.6%
4	3037	3.1%
5	220	0.2%
Total	98164	100.0%

CCC-17: Distribution of Households by Day of Week of Travel (Weighted) – DAY

Day of Week of Travel	Count	Percent
Monday	20882	21.3%
Tuesday	16571	16.9%
Wednesday	17373	17.7%
Thursday	20869	21.3%
Friday	22469	22.9%
Total	98164	100.0%

Person Characteristics

CCC-18: Respondent Gender (Weighted) – GEND

Respondent Gender	Count	Percent
Male	93485	46.6%
Female	106887	53.3%
Refused	169	0.1%
Total	200541	100.0%

CCC-19: Age Distribution (Weighted) –AGE

Age Distribution	Count	Percent
Younger than 20	32248	16.1%
20 to 34 years	29854	14.9%
35 to 54 years	46597	23.2%
55 to 64 years	30713	15.3%
65 years or older	59072	29.5%
Refused Age	2055	1.0%
Total	200541	100.0%

CCC-20: Valid Driver's License (Weighted)- LIC

Valid Driver's License	Count	Percent
Yes	157964	90.4%
No	16708	9.6%
Total	174673	100.0%

CCC-21: Respondent has Transit Pass (Weighted) – TRANS

Respondent has Transit Pass	Count	Percent
Yes	13614	7.8%
No	160890	92.1%
Don't Know	169	0.1%
Total	174673	100.0%

CCC-22: Transit Pass Type (Weighted)- PASST1, PASST2, PASST3

Transit Pass Type, Multiple Response	Count	Percent
Local Bus Pass	2743	20.2%
Commuter Rail Pass	66	0.5%
Charlie Card	6276	46.1%
Other, specify	3323	24.4%
Don't Know	689	5.1%
Refused	516	3.8%
Total	13614	100.0%

CCC-23: Worker Status, Computed (Weighted) – WORKS

Worker Status, Computed	Count	Percent
Yes	92029	52.7%
No	82644	47.3%
Total	174673	100.0%

CCC-24: Employment Status, Non-workers (Weighted) – WKSTAT

Employment Status, Non workers	Count	Percent
Retired	56115	67.9%
Disabled/On Disability Status	8937	10.8%
Homemaker	4846	5.9%
Unemployed but looking for work	7929	9.6%
Unemployed and not looking for work	1796	2.2%
Student	3021	3.7%
Total	82644	100.0%

CCC-25: Average Number of Jobs (Weighted)-JOBS

Jobs	Average
Average Number of Jobs	1.13

CCC-26: Hours Worked per Day (Weighted) - HOURS

Hours Worked per Day	Count	Percent
1	873	0.9%
2	1205	1.3%
3	2117	2.3%
4	8109	8.8%
5	5704	6.2%
6	7406	8.0%
7	5550	6.0%
8	38735	42.1%
9	8414	9.1%
10	8818	9.6%
11	250	0.3%
12	2185	2.4%
13	120	0.1%
14	200	0.2%
15	587	0.6%
20	289	0.3%
DK	1237	1.3%
RF	231	0.3%
Total	92029	100.0%

CCC-27: Respondent Average Number of Days Worked Per Week (Weighted) – WDAYS

Days Worked Per Week	Count	Percent
1	1533	1.7%
2	3614	3.9%
3	9712	10.6%
4	11838	12.9%
5	49887	54.2%
6	10654	11.6%
7	4168	4.5%
Don't Know	393	0.4%
Refused	231	0.3%
Total	92029	100.0%

CCC-28: Telecommute Status (Weighted) - TELEW

Worker Telecommutes	Count	Percent
Yes	17247	18.7%
No	71642	77.8%
Don't Know	2909	3.2%
Refused	231	0.3%
Total	92029	100.0%

CCC-29: Flexible Work Program Offered at Work (Weighted) – SCHED

Flexible Work Program Offered at Work	Count	Percent
Yes	15104	16.4%
No	71465	77.7%
Don't Know	5230	5.7%
Refused	231	0.3%
Total	92029	100.0%

CCC-30: Type of Flexible Work Programs Offered, Multiple Response (Weighted)- FLEXP1, FLEXP2, FLEXP3

Type of Flexible Work Programs Offered, Multiple Response	Count	Percent
9/80 Work Period	743	4.6%
Early Arrival/Departure	4316	26.5%
4/40 Work Week	1467	9.0%
Flexible Hours	4851	29.8%
Other, Specify	3033	18.7%
Don't Know	1668	10.3%
Refused	182	1.1%
Total	16260	100.0%

CCC-31: Respondent Participates in Flexible Work Program (Weighted)-FLEXT

Respondent Participates in Flexible Work Program	Count	Percent
Yes	12452	82.4%
No	2491	16.5%
Don't Know	160	1.1%
Total	15104	100.0%

CCC-32: Disabled License Plate (Weighted)- EDISA

Disabled License Plate	Count	Percent
Yes	15599	8.0%
No	178201	91.6%
Don't Know	724	0.4%
Total	194525	100.0%

CCC-33: Disabled Transit Registration (Weighted) –EDIS2

Disabled Transit Registration	Count	Percent
Yes	5276	2.7%
No	188783	97.0%
Don't Know	465	0.2%
Total	194525	100.0%

CCC-34: Level of Education Completed (Weighted) –EDUCA

Level of Education Completed	Count	Percent
Not a high school graduate, 12th grade or less. (Includes very young children)	35155	17.5%
High school graduate (high school diploma or GED)	36140	18.0%
Some college credit but no degree	23938	11.9%
Associate or technical school degree	20136	10.0%
Bachelor's or undergraduate degree	42712	21.3%
Graduate Degree (includes professional degrees, MD, DDs, JD)	40633	20.3%
Don't Know	1828	0.9%
Total	200541	100.0%

CCC-35: School Enrollment Status (Weighted)-ENROL

School Enrollment Status	Count	Percent
Yes	37566	18.7%
No	162769	81.2%
Don't Know	206	0.1%
Total	200541	100.0%

CCC-36: Full-time / Part-time Student Status (Weighted)-FPTIM

Full-time / Part-time Student Status	Count	Percent
Part-time	9214	24.5%
Full-time	28352	75.5%
Total	37566	100.0%

CCC-37: Student Grade Level Attends (Weighted)-SCHOL

Student Grade Level	Count	Percent
Daycare	652	1.7%
Nursery School, Preschool	1380	3.7%
Kindergarten to Grade 8	15567	41.4%
Grade 9 to 12	9372	24.9%
Technical/Vocational School	376	1.0%
Two-year college (community college)	3657	9.7%
4-year college or university	4277	11.4%
Graduate School/Professional	2284	6.1%
Total	37566	100.0%

CCC-38: Transit Trips Made in Past Week (Weighted)- TTRIP

Transit Trips Made in Past Week	Count	Percent
0	172083	85.8%
1	2615	1.3%
2	4620	2.3%
3	971	0.5%
4	3144	1.6%
5	947	0.5%
6	1119	0.6%
7	1211	0.6%
8	2271	1.1%
9	0	0.0%
10	4874	2.4%
11	0	0.0%
12	1349	0.7%
13	0	0.0%
14	247	0.2%
15	349	0.3%
16	0	0.0%
17	0	0.0%
18	130	0.1%
19	0	0.0%
20	1017	0.5%
21	204	0.1%
58	213	0.1%
Don't Know	1922	1.0%
Refused	454	0.2%
Total	200541	100.0%

CCC-39: Bike Facilities Available at Work/School (Weighted)- BIKFA

Bike Facilities Available at Work/School	Count	Percent
Yes	56206	47.4%
No	45516	38.4%
Don't Know	14733	12.4%
Refused	2192	1.8%
Total	118646	100.0%

CCC-40: Days Used Bike for Recreation in Past Week (Weighted)- BIKD1

Days Used Bike for Recreation in Past Week	Count	Percent
0	92056	66.7%
1	10240	7.4%
2	8620	6.2%
3	5103	3.7%
4	2892	2.1%
5	1292	0.9%
6	575	0.4%
7	1709	1.2%
Don't Know	9490	6.9%
Refused	6009	4.4%
Total	137987	100.0%

CCC-41: Days Used Bike for Transportation in Past Week (Weighted) – BIKD2

Days Used Bike for Transportation in Past Week	Count	Percent
0	108522	78.6%
1	2824	2.0%
2	4453	3.2%
3	1630	1.2%
4	1227	0.9%
5	1284	0.9%
6	595	0.4%
7	1177	0.9%
Don't Know	9913	7.2%
Refused	6361	4.6%
Total	137987	100.0%

CCC-42: Bike Lanes/Trails Used (Weighted) – BIKRD

Bike Lanes/Trails Used for Non-Recreational Purposes	Count	Percent
Off-Road	23849	17.3%
On-Road	30596	22.2%
Both	36773	26.6%
Don't Know	37857	27.4%
Refused	8912	6.5%
Total	137987	100.0%

CCC-43: Internet was Used on Travel Day in Place of Trips (Weighted)-INUSE

Internet was used on Travel Day in Place of Trips	Count	Percent
Yes	11610	5.8%
No	180765	90.1%
Don't Know	7390	3.7%
Refused	776	0.4%
Total	200541	100.0%

CCC-44: Reason for Non-Travel (Weighted)-NOGO

Reason for Non-Travel	Count	Percent
Personally Sick	4838	16.1%
Homebound Elderly or Disabled	4813	16.1%
Worked at Home for Pay	1243	4.1%
Worked Around Home (Not for Pay)	10968	36.6%
Out of Area	1725	5.8%
Other, SPECIFY	6380	21.3%
Total	29967	100.0%

Vehicle Characteristics

CCC-45: Vehicle Year (Weighted) – YEAR

Vehicle Year	Count	Percent
1964 or older	105	0.1%
1965-1979	1060	0.6%
1980-1989	3441	2.1%
1990-1999	29325	17.8%
2000-2003	43523	26.4%
2004-2006	42059	25.5%
2007	15102	9.2%
2008	11736	7.1%
2009	6465	3.9%
2010	9946	6.0%
2011	2080	1.3%
Total	164842	100.0%

CCC-46: Vehicle Make (Weighted) – MAKE

Vehicle Make	Count	Percent
Acura	1150	0.7%
Audi	859	0.5%
BMW	2275	1.4%
Buick	4606	2.8%
Cadillac	1403	0.8%
Chevrolet	11814	7.1%
Chrysler	3299	2.0%
Dodge	4664	2.8%
Ford	19021	11.4%
Geo	213	0.1%
GMC	3455	2.1%
Harley Davidson	1020	0.6%
Honda	19373	11.6%
Hummer	123	0.1%
Hyundai	3859	2.3%
Infiniti	187	0.1%
Isuzu	664	0.4%
Jaguar	493	0.3%
Jeep	6695	4.0%
Kia	1288	0.8%
Lexus	1801	1.1%
Lincoln	2124	1.3%
Mazda	1740	1.0%

Vehicle Make	Count	Percent
Mercedes	2222	1.3%
Mercury	3264	1.9%
Mitsubishi	611	0.4%
Nissan	5080	3.0%
Oldsmobile	1463	0.9%
Plymouth	565	0.3%
Pontiac	1184	0.7%
Porsche	139	0.1%
Saab	1931	1.2%
Saturn	3476	2.1%
Scion	423	0.3%
Subaru	6500	3.9%
Suzuki	425	0.3%
Toyota	37373	22.3%
Volkswagen	4491	2.7%
Volvo	3201	1.9%
Other, SPECIFY	1860	1.1%
Don't Know	832	0.5%
Refused	225	0.1%
Total	167389	100.0%

CCC-47: Vehicle Body Type (Weighted) – BODY

Vehicle Body Type	Count	Percent
Car/Station Wagon	81765	48.8%
Van (any type)	12406	7.4%
SUV	41605	24.9%
Pickup Truck	20879	12.5%
Other type of truck	157	0.1%
RV	574	0.3%
Motorcycle	1890	1.1%
Refused	8112	4.8%
Total	167389	100.0%

CCC-48: Vehicle Fuel Type (Weighted) - FUEL

Vehicle Fuel Type	Count	Percent
Gas	162096	96.8%
Diesel	1642	1.0%
Hybrid	3032	1.8%
Flex Fuel	451	0.3%
Refused	168	0.1%
Total	167389	100.0%

Place Characteristics

CCC-49: Primary Trip Purpose (Weighted) – TPURP

Primary Trip Purpose	Count	Percent
All other home activities	436084	44.6%
Work/Job	88470	9.1%
Routine shopping (groceries, clothing, convenience store, HH maintenance)	65681	6.7%
Visit friends/relatives	47826	4.9%
Household errands (bank, dry cleaning, etc.)	36336	3.7%
Work Business Related	34984	3.6%
Eat meal outside of home	33759	3.5%
Attending Class	29764	3.0%
Personal business (visit government office, attorney, accountant)	28402	2.9%
Indoor recreation/entertainment	26234	2.7%
Drop off passenger from car	24225	2.5%
Health care (doctor, dentist)	22765	2.3%
Pick up passenger from car	21837	2.2%
Changed type of transportation	20844	2.1%
Service private vehicle (gas, oil lube, etc.)	17454	1.8%
Outdoor recreation/entertainment	10874	1.1%
Civic/Religious activities	10250	1.0%
Working at home (for pay)	6678	0.7%
Shopping for major purchases or specialty items (appliance, electronics, new vehicle, major HH repairs)	5184	0.5%
Loop trip	3399	0.3%
All other School Activities	3281	0.3%
All other activities at work	1236	0.1%
Other, SPECIFY	853	0.1%
While Traveling -- Other, Specify	259	0.0%
Volunteer Work/Activities	0	0.0%
Total	976680	100.0%

CCC-50: Total People Traveling in Travel Party, Including Respondent (Weighted) – TOTTR

Total People Traveling	Count	Percent
1 person	461794	61.1%
2 persons	202790	26.8%
3 persons	47246	6.2%
4 persons	30415	4.0%
5 persons	13906	1.8%
Total	756150	100.0%

CCC-51: Parking Location (Weighted) – PRKTY

Parking Location	Count	Percent
Parking Lot	351479	51.3%
Parking Garage	6497	0.9%
Street	25921	3.8%
Driveway/personal garage	248205	36.2%
Did not park	41489	6.1%
Other, SPECIFY	806	0.1%
Don't Know	9220	1.3%
Refused	1385	0.2%
Total	685001	100.0%

CCC-52: Paid to Park (Weighted) – PRKCS

Paid to Park	Count	Percent
Did not Pay	640372	93.5%
Did Pay, record amount	2265	0.3%
Don't Know	1632	0.2%
Refused	40731	5.9%
Total	685001	100.0%

CCC-53: How Parking Fare was Paid (Weighted) – PRKHW

How Parking Fare was Paid	Count	Percent
Cash/Credit/Debit Card	2133	94.2%
Employer-Provided Parking Pass	132	5.8%
Total	2265	100.0%

CCC-54: Toll Road Used on Trip (Weighted) – TOLL (Use a Toll road)?

Use a Toll Road	Count	Percent
Yes	1435	0.2%
No	661504	96.6%
Don't Know	21850	3.2%
Refused	212	0.0%
Total	685001	100.0%

CCC-55: Toll Road Used (Weighted) – TOLLT (Which Toll road was used)?

Which Toll Road was Used	Count	Percent
Turnpike	948	66.0%
Ted Williams Tunnel	387	27.0%
Tobin Tunnel	101	7.0%
Total	1435	100.0%

Travel Behavior

CCC-56: Average Household and Person Trip Rates (Weighted)

	Average Trip Rate
Household	10.6
Person	4.1

CCC-57: Trip Rates by Household Size (Weighted)

Household Size	Trip Rate
1	4.5
2	8.3
3	13.6
4	17.5
5	22.2
6	26.6
7	24.8
8 or more	29.8
Total	10.6

CCC-58: Trip Rates by Number of Household Workers (Weighted)

Household Workers	Trip Rate
0	6.6
1	9.7
2	13.1
3	16.8
4	22.0
5	27.2
6	22.7
Total	10.6

CCC-59: Trip Rates by Household Income (Weighted)

Household Income	Trip Rate
Less than $15,000	8.3
$15,000-$24,999	9.2
$25,000-$34,999	8.4
$35,000-$49,999	9.4
$50,000-$74,999	10.2
$75,000-$99,999	11.4
$100,000-$149,999	13.2
$150,000 or more	13.3
Don't Know/Refused	9.8
Total	10.6

CCC-60: All Trip Modes (Weighted)

Transportation Mode	Count	Percent
Walk	49002	6.3%
Bike	9209	1.2%
Auto/Van/Truck Driver	526450	67.8%
Auto/Van/Truck Passenger	158550	20.4%
Public Bus	3142	0.4%
Train	2510	0.3%
Ferry/boat	1158	0.1%
Dial-A-Ride/Paratransit	2819	0.4%
Taxi	352	0.0%
School bus	19637	2.5%
Other, SPECIFY	3310	0.4%
Total	776139	100.0%

CCC-61: Mode to Work (Weighted)

Mode to Work	Count	Percent
Works from home	6610	7.2%
Walk	4048	4.4%
Bike	2136	2.3%
Auto/Van/Truck Driver	69240	75.2%
Auto/Van/Truck Passenger	4068	4.4%
Bus / Public Transit	1453	1.6%
Other, SPECIFY	3544	3.9%
Don't Know	784	0.9%
Refused	146	0.2%
Total	92029	100.0%

CCC-62: Mode to School (Weighted)

Mode to School	Count	Percent
Home schooled	2218	5.9%
Walk	2408	6.4%
Bike	405	1.1%
Auto/Van/Truck Driver	6166	16.4%
Auto/Van/Truck Passenger	10489	27.9%
Bus / Public Transit	1315	3.5%
School Bus	13313	35.4%
Other, SPECIFY	613	1.6%
Don't Know	639	1.7%
Total	37566	100.0%

Survey Results for Montachusett MPO (MRPC)

Household Characteristics

MRPC-1: Household Size (Weighted) – HHSIZ

Household Size	Count	Percent
1	26120	31.2%
2	26623	31.8%
3	14669	17.5%
4	11342	13.5%
5	4251	5.1%
6	667	0.8%
7	125	0.1%
Total	83797	100.0%

MRPC-2: Transit Used on Regular Basis (Weighted) –RIBUS

Transit Used on Regular Basis	Count	Percent
Yes	10152	12.1%
No	73567	87.8%
Don't Know	78	0.1%
Total	83797	100.0%

MRPC-3: Household Bicycles (Weighted) – HHBIC

Household Bicycles	Count	Percent
0	36552	43.6%
1	15363	18.3%
2	14274	17.0%
3	6214	7.4%
4	6225	7.4%
5	3625	4.3%
6	958	1.1%
7	276	0.3%
8	150	0.2%
Don't Know	160	0.2%
Total	83797	100.0%

MRPC-4: Household Number of Vehicles (Weighted)-HHVEH

Household Vehicles	Count	Percent
0	6902	8.2%
1	29157	34.8%
2	30570	36.5%
3	10098	12.1%
4	3632	4.3%
5	1953	2.3%
6	1114	1.3%
7	65	0.1%
8 or More	306	0.4%
Total	83797	100.0%

MRPC-5: Household Ethnicity (Weighted)-RACE

Household Ethnicity	Count	Percent
White Alone	77498	92.5%
Black or African American Alone	426	0.5%
American Indian or Alaskan Native Alone	278	0.3%
Asian Alone	637	0.8%
Some Other Race Alone	3543	4.2%
Two or More Races	1181	1.4%
Refused	234	0.3%
Total	83797	100.0%

MRPC-6: Hispanic or Latino Households (Weighted) – HISP

Hispanic or Latino Household	Count	Percent
Yes	4837	5.8%
No	78726	93.9%
Refused	234	0.3%
Total	83797	100.0%

MRPC-7: Household Residence Type (Weighted)-RESTY

Household Residence Type	Count	Percent
Single Family Detached Dwelling	57187	68.2%
Building with 2-4 Units	14597	17.4%
Building with 5-19 Units	5096	6.1%
Building with 20 or More Units	6706	8.0%
Refused	210	0.3%
Total	83797	100.0%

MRPC-8: Ownership of Household Residence (Weighted) – OWN

Home Ownership	Count	Percent
Own/Mortgaged	62527	74.6%
Renter	21270	25.4%
Total	83797	100.0%

MRPC-9: Cell phone lines in Household (Weighted) – CPLNS

Cell Phones in Household	Count	Percent
0	6850	8.2%
1	28320	33.8%
2	29677	35.4%
3	11172	13.3%
4	6225	7.4%
5	1365	1.6%
6	0	0%
7	0	0%
8	189	0.2%
Total	83797	100.0%

MRPC-10: Landlines in Household (Weighted)-PHLNS

Landlines in Household	Count	Percent
0	77989	93.1%
1	5020	6.0%
2	358	0.4%
3	125	0.1%
4	306	0.4%
5	83797	100.0%
Total	77989	93.1%

MRPC-11: Fax Lines in Household (Weighted) – FXLNS

Fax Lines in Household	Count	Percent
0	3221	55.5%
1	2588	44.5%
Total	5808	100.0%

MRPC-12: Household Income (Weighted) – INCOME

Household Income	Count	Percent
Less than $15,000	11975	14.3%
$15,000-$24,999	10389	12.4%
$25,000-$34,999	7748	9.2%
$35,000-$49,999	8500	10.1%
$50,000-$74,999	14321	17.1%
$75,000-$99,999	13138	15.7%
$100,000-$149,999	8657	10.3%
$150,000 or more	5615	6.7%
Don't Know/Refused	3455	4.1%
Total	83797	100.0%

MRPC-13: Trips Made by Household on Travel Day (Weighted) – HTRIPS

Trips Made by Household on Travel Day	Count	Percent
None	5423	6.5%
1 to 5	29425	35.1%
6 to 10	27174	32.4%
11 to 15	11742	14.0%
16 to 20	4954	5.9%
21 to 30	4307	5.1%
31 to 50	772	0.9%
Total	83797	100.0%

MRPC-14: Household Students (Weighted) – HHSTU

Household Students	Count	Percent
0	55935	66.8%
1	13634	16.3%
2	9138	10.9%
3	4976	5.9%
4	115	0.1%
Total	83797	100.0%

MRPC-15: Household Workers (Weighted) – HHWRK

Household Workers	Count	Percent
0	22837	27.3%
1	30022	35.8%
2	24524	29.3%
3	5256	6.3%
4	1158	1.4%
Total	83797	100.0%

MRPC-16: Licensed Drivers in Household (Weighted) –HHLIC

Licensed Drivers in Household	Count	Percent
0	5337	6.4%
1	26527	31.7%
2	40051	47.8%
3	9616	11.5%
4	1863	2.2%
5	403	0.5%
Total	83797	100.0%

MRPC-17: Distribution of Households by Day of Week of Travel (Weighted) – DAY

Day of Week of Travel	Count	Percent
Monday	19390	23.1%
Tuesday	18124	21.6%
Wednesday	14032	16.7%
Thursday	15497	18.5%
Friday	16753	20.0%
Total	83797	100.0%

Person Characteristics

MRPC-18: Respondent Gender (Weighted) – GEND

Respondent Gender	Count	Percent
Male	93058	47.2%
Female	104186	52.8%
Total	197244	100.0%

MRPC-19: Age Distribution (Weighted) –AGE

Age Distribution	Count	Percent
Younger than 20	45402	23.0%
20 to 34 years	34384	17.4%
35 to 54 years	59504	30.2%
55 to 64 years	25949	13.2%
65 years or older	28200	14.3%
Refused Age	3806	1.9%
Total	197244	100.0%

MRPC-20: Valid Driver's License (Weighted)- LIC

Valid Driver's License	Count	Percent
Yes	144981	90.3%
No	15499	9.7%
Total	160479	100.0%

MRPC-21: Respondent has Transit Pass (Weighted) – TRANS

Respondent has Transit Pass	Count	Percent
Yes	14046	8.8%
No	144926	90.3%
Don't Know	1507	0.9%
Total	160479	100.0%

MRPC-22: Transit Pass Type (Weighted)- PASST1, PASST2, PASST3

Transit Pass Type, Multiple Response	Count	Percent
Local Bus Pass	1273	9.1%
Link Pass	235	1.7%
Inner Express Bus Pass	253	1.8%
Commuter Rail Pass	939	6.7%
Charlie Card	8095	57.6%
Other, specify	2285	16.3%
Don't Know	560	4.0%
Refused	406	2.9%
Total	14046	100.0%

MRPC-23: Worker Status, Computed (Weighted) – WORKS

Worker Status, Computed	Count	Percent
Yes	101884	63.5%
No	58595	36.5%
Total	160479	100.0%

MRPC-24: Employment Status, Non-workers (Weighted) – WKSTAT

Employment Status, Non workers	Count	Percent
Retired	24684	42.1%
Disabled/On Disability Status	9090	15.5%
Homemaker	6607	11.3%
Unemployed but looking for work	9319	15.9%
Unemployed and not looking for work	982	1.7%
Student	6992	11.9%
Other, SPECIFY	705	1.2%
Refused	216	0.4%
Total	58595	100.0%

MRPC-25: Average Number of Jobs (Weighted)-JOBS

Jobs	Average
Average Number of Jobs	1.85

MRPC-26: Hours Worked per Day (Weighted) - HOURS

Hours Worked per Day	Count	Percent
1	323	0.3%
2	1352	1.3%
3	2805	2.8%
4	4481	4.4%
5	5411	5.3%
6	7740	7.6%
7	5333	5.2%
8	45152	44.3%
9	10354	10.2%
10	10081	9.9%
11	1432	1.4%
12	3915	3.8%
13	104	0.1%
15	135	0.1%
16	213	0.2%
20	91	0.1%
24	104	0.1%
Don't Know	2567	2.5%
Refused	290	0.3%
Total	101884	100.0%

MRPC-27: Respondent Average Number of Days Worked Per Week (Weighted) – WDAYS

Days Worked Per Week	Count	Percent
1	1458	1.4%
2	3988	3.9%
3	8261	8.1%
4	11491	11.3%
5	67684	66.4%
6	7509	7.4%
7	1317	1.3%
Don't Know	102	0.1%
Refused	73	0.1%
Total	101884	100.0%

MRPC-28: Telecommute Status (Weighted) - TELEW

Worker Telecommutes	Count	Percent
Yes	19419	19.1%
No	81016	79.5%
Don't Know	1376	1.4%
Refused	73	0.1%
Total	101884	100.0%

MRPC-29: Flexible Work Program Offered at Work (Weighted) – SCHED

Flexible Work Program Offered at Work	Count	Percent
Yes	27905	27.4%
No	69885	68.6%
Don't Know	4021	3.9%
Refused	73	0.1%
Total	101884	100.0%

MRPC-30: Type of Flexible Work Programs Offered, Multiple Response (Weighted)- FLEXP1, FLEXP2, FLEXP3

Type of Flexible Work Programs Offered, Multiple Response	Count	Percent
9/80 Work Period	1084	3.7%
Early Arrival/Departure	12571	43.1%
4/40 Work Week	1206	4.1%
Flexible Hours	4363	15.0%
Other, Specify	4289	14.7%
Don't Know	5114	17.5%
Refused	520	1.8%
Total	29148	100.0%

MRPC-31: Respondent Participates in Flexible Work Program (Weighted)-FLEXT

Respondent Participates in Flexible Work Program	Count	Percent
Yes	22960	82.3%
No	4785	17.1%
Don't Know	160	0.6%
Total	27905	100.0%

MRPC-32: Disabled License Plate (Weighted)- EDISA

Disabled License Plate	Count	Percent
Yes	11077	5.9%
No	176044	94.0%
Don't Know	168	0.1%
Total	187289	100.0%

MRPC-33: Disabled Transit Registration (Weighted) –EDIS2

Disabled Transit Registration	Count	Percent
Yes	7901	4.2%
No	179040	95.6%
Don't Know	348	0.2%
Total	187289	100.0%

MRPC-34: Level of Education Completed (Weighted) –EDUCA

Level of Education Completed	Count	Percent
Not a high school graduate, 12th grade or less. (Includes very young children)	51092	25.9%
High school graduate (high school diploma or GED)	40731	20.7%
Some college credit but no degree	24601	12.5%
Associate or technical school degree	18912	9.6%
Bachelor's or undergraduate degree	38454	19.5%
Graduate Degree (includes professional degrees, MD, DDs, JD)	22826	11.6%
Other, SPECIFY	119	0.1%
Don't Know	332	0.2%
Refused	177	0.1%
Total	197244	100.0%

MRPC-35: School Enrollment Status (Weighted)-ENROL

School Enrollment Status	Count	Percent
Yes	51386	26.1%
No	145690	73.9%
Don't Know	167	0.1%
Total	197244	100.0%

MRPC-36: Full-time / Part-time Student Status (Weighted)-FPTIM

Full-time / Part-time Student Status	Count	Percent
Part-time	9159	17.8%
Full-time	42227	82.2%
Total	51386	100.0%

MRPC-37: Student Grade Level Attends (Weighted)-SCHOL

Student Grade Level	Count	Percent
Daycare	1639	3.2%
Nursery School, Preschool	1493	2.9%
Kindergarten to Grade 8	25089	48.8%
Grade 9 to 12	11730	22.8%
Technical/Vocational School	151	0.3%
Two-year college (community college)	4245	8.3%
4-year college or university	4262	8.3%
Graduate School/Professional	2397	4.7%
Don't Know/Refused	380	0.7%
Total	51386	100.0%

MRPC-38: Transit Trips Made in Past Week (Weighted)- TTRIP

Transit Trips Made in Past Week	Count	Percent
0	165872	84.1%
1	2126	1.1%
2	7172	3.6%
3	753	0.4%
4	2859	1.4%
5	2067	1.0%
6	1208	0.6%
7	443	0.2%
8	1336	0.7%
10	4942	2.5%
12	1436	0.7%
14	2569	1.3%
16	82	0.0%
18	398	0.2%
19	153	0.1%
20	469	0.2%
24	547	0.3%
25	195	0.1%
28	661	0.3%
30	164	0.1%
Don't Know	1789	0.9%
Total	197244	100.0%

MRPC-39: Bike Facilities Available at Work/School (Weighted)- BIKFA

Bike Facilities Available at Work/School	Count	Percent
Yes	52127	36.9%
No	71909	50.9%
Don't Know	16156	11.4%
Refused	1164	0.8%
Total	141357	100.0%

MRPC-40: Days Used Bike for Recreation in Past Week (Weighted)- BIKD1

Days Used Bike for Recreation in Past Week	Count	Percent
0	94455	70.1%
1	6809	5.1%
2	5681	4.2%
3	2196	1.6%
4	1274	0.9%
5	578	0.4%
6	226	0.2%
7	1335	1.0%
Don't Know	16303	12.1%
Refused	5919	4.4%
Total	134777	100.0%

MRPC-41: Days Used Bike for Transportation in Past Week (Weighted) – BIKD2

Days Used Bike for Transportation in Past Week	Count	Percent
0	106700	79.2%
1	2677	2.0%
2	737	0.5%
3	695	0.5%
4	153	0.1%
5	721	0.5%
6	0	0%
7	217	0.2%
Don't Know	16689	12.4%
Refused	6188	4.6%
Total	134777	100.0%

MRPC-42: Bike Lanes/Trails Used (Weighted) – BIKRD

Bike Lanes/Trails Used for Non-Recreational Purposes	Count	Percent
Off-Road	13883	10.3%
On-Road	30033	22.3%
Both	26936	20.0%
Don't Know	52006	38.6%
Refused	11919	8.8%
Total	134777	100.0%

MRPC-43: Internet was Used on Travel Day in Place of Trips (Weighted)-INUSE

Internet was used on Travel Day in Place of Trips	Count	Percent
Yes	8412	4.3%
No	177833	90.2%
Don't Know	9912	5.0%
Refused	1086	0.6%
Total	197244	100.0%

MRPC-44: Reason for Non-Travel (Weighted)-NOGO

Reason for Non-Travel	Count	Percent
Personally Sick	1900	6.7%
Caretaking Sick Kids	326	1.1%
Caretaking Sick Other	141	0.5%
Homebound Elderly or Disabled	4148	14.6%
Worked at Home for Pay	3176	11.2%
Worked Around Home (Not for Pay)	10152	35.6%
Out of Area	395	1.4%
Other, SPECIFY	8246	29.0%
Total	28483	100.0%

Vehicle Characteristics

MRPC-45: Vehicle Year (Weighted) – YEAR

Vehicle Year	Count	Percent
1964 or older	112	0.1%
1965-1979	1548	1.0%
1980-1989	4032	2.7%
1990-1999	29473	19.8%
2000-2003	36414	24.4%
2004-2006	37866	25.4%
2007	11843	7.9%
2008	8496	5.7%
2009	9057	6.1%
2010	7902	5.3%
2011	2319	1.6%
Total	149061	100.0%

MRPC-46: Vehicle Make (Weighted) – MAKE

Vehicle Make	Count	Percent
Acura	1073	0.7%
Audi	1629	1.1%
BMW	2213	1.4%
Buick	3472	2.2%
Cadillac	976	0.6%
Chevrolet	13823	8.9%
Chrysler	3111	2.0%
Dodge	5982	3.9%
Ford	21680	14.0%
GMC	3388	2.2%
Harley Davidson	2584	1.7%
Honda	14373	9.3%
Hyundai	6690	4.3%
Infiniti	245	0.2%
Isuzu	528	0.3%
Jaguar	267	0.2%
Jeep	3586	2.3%
Kawasaki	603	0.4%
Kia	1821	1.2%
Lexus	821	0.5%
Lincoln	796	0.5%
Mazda	3999	2.6%
Mercedes	883	0.6%

Vehicle Make	Count	Percent
Mercury	2024	1.3%
Mitsubishi	748	0.5%
Nissan	6805	4.4%
Oldsmobile	1457	0.9%
Plymouth	701	0.5%
Pontiac	1242	0.8%
Porsche	114	0.1%
Saab	1672	1.1%
Saturn	2304	1.5%
Scion	493	0.3%
Subaru	7420	4.8%
Suzuki	1159	0.8%
Toyota	24571	15.9%
Volkswagen	2678	1.7%
Volvo	1661	1.1%
Yamaha	1413	0.9%
Other, SPECIFY	1859	1.2%
Don't Know	1606	1.0%
Total	154469	100.0%

MRPC-47: Vehicle Body Type (Weighted) – BODY

Vehicle Body Type	Count	Percent
Car/Station Wagon	75598	48.9%
Van (any type)	9980	6.5%
SUV	36747	23.8%
Pickup Truck	18754	12.1%
RV	526	0.3%
Motorcycle	6248	4.0%
Refused	6615	4.3%
Total	154469	100.0%

MRPC-48: Vehicle Fuel Type (Weighted) - FUEL

Vehicle Fuel Type	Count	Percent
Gas	149923	97.1%
Diesel	2337	1.5%
Hybrid	2209	1.4%
Total	154469	100.0%

Place Characteristics

MRPC-49: Primary Trip Purpose (Weighted) – TPURP

Primary Trip Purpose	Count	Percent
All other home activities	412095	46.2%
Work/Job	79598	8.9%
Routine shopping (groceries, clothing, convenience store, HH maintenance)	62804	7.0%
Visit friends/relatives	37097	4.2%
Changed type of transportation	31351	3.5%
Work Business Related	27364	3.1%
Eat meal outside of home	26875	3.0%
Attending Class	25884	2.9%
Drop off passenger from car	25854	2.9%
Household errands (bank, dry cleaning, etc.)	24984	2.8%
Personal business (visit government office, attorney, accountant)	22792	2.6%
Pick up passenger from car	20675	2.3%
Indoor recreation/entertainment	20465	2.3%
Health care (doctor, dentist)	18408	2.1%
Outdoor recreation/entertainment	16558	1.9%
Service private vehicle (gas, oil lube, etc.)	11615	1.3%
Civic/Religious activities	8166	0.9%
Working at home (for pay)	7941	0.9%
Shopping for major purchases or specialty items (appliance, electronics, new vehicle, major HH repairs)	3699	0.4%
All other School Activities	3261	0.4%
All other activities at work	1939	0.2%
Loop trip	1793	0.2%
Other, SPECIFY	847	0.1%
Volunteer Work/Activities	157	0.0%
While Traveling -- Other, Specify	0	0.0%
Total	892221	100.0%

MRPC-50: Total People Traveling in Travel Party, Including Respondent (Weighted) – TOTTR

Total People Traveling	Count	Percent
1 person	384058	57.5%
2 persons	177157	26.5%
3 persons	65343	9.8%
4 persons	28570	4.3%
5 persons	13004	1.9%
Total	668132	100.0%

MRPC-51: Parking Location (Weighted) – PRKTY

Parking Location	Count	Percent
Parking Lot	285881	47.6%
Parking Garage	7696	1.3%
Street	43782	7.3%
Driveway/personal garage	214743	35.8%
Did not park	43462	7.2%
Other, SPECIFY	2582	0.4%
Don't Know	1977	0.3%
Refused	174	0.0%
Total	600296	100.0%

MRPC-52: Paid to Park (Weighted) – PRKCS

Paid to Park	Count	Percent
Did not Pay	549696	91.6%
Did Pay, record amount	6554	1.1%
Don't Know	1510	0.3%
Refused	42536	7.1%
Total	600296	100.0%

MRPC-53: How Parking Fare was Paid (Weighted) – PRKHW

How Parking Fare was Paid	Count	Percent
Cash/Credit/Debit Card	5343	81.5%
Per-Paid parking Pass	977	14.9%
Employer-Provided Parking Pass	160	2.4%
Don't Know	74	1.1%
Total	6554	100.0%

MRPC-54: Toll Road Used on Trip (Weighted) – TOLL (Use a Toll road)?

Use a Toll Road	Count	Percent
Yes	1890	0.3%
No	588178	98.0%
Don't Know	10054	1.7%
Refused	174	0.0%
Total	600296	100.0%

MRPC-55: Toll Road Used (Weighted) – TOLLT (Which Toll road was used)?

Which Toll Road was Used	Count	Percent
Turnpike	1502	79.4%
Ted Williams Tunnel	238	12.6%
Sumner Tunnel	151	8.0%
Total	1890	100.0%

Travel Behavior

MRPC-56: Average Household and Person Trip Rates (Weighted)

	Average Trip Rate
Household	10.6
Person	4.1

MRPC-57: Trip Rates by Household Size (Weighted)

Household Size	Trip Rate
1	4.5
2	8.3
3	13.6
4	17.5
5	22.2
6	26.6
7	24.8
8 or more	29.8
Total	10.6

MRPC-58: Trip Rates by Number of Household Workers (Weighted)

Household Workers	Trip Rate
0	6.6
1	9.7
2	13.1
3	16.8
4	22.0
5	27.2
6	22.7
Total	10.6

MRPC-59: Trip Rates by Household Income (Weighted)

Household Income	Trip Rate
Less than $15,000	8.3
$15,000-$24,999	9.2
$25,000-$34,999	8.4
$35,000-$49,999	9.4
$50,000-$74,999	10.2
$75,000-$99,999	11.4
$100,000-$149,999	13.2
$150,000 or more	13.3
Don't Know/Refused	9.8
Total	10.6

MRPC-60: All Trip Modes (Weighted)

Transportation Mode	Count	Percent
Walk	47668	6.9%
Bike	3143	0.5%
Auto/Van/Truck Driver	451346	64.9%
Auto/Van/Truck Passenger	148950	21.4%
Public Bus	4780	0.7%
Train	8176	1.2%
Dial-A-Ride/Paratransit	2744	0.4%
Taxi	1273	0.2%
School bus	25573	3.7%
Other, SPECIFY	1324	0.2%
Total	694977	100.0%

MRPC-61: Mode to Work (Weighted)

Mode to Work	Count	Percent
Works from home	7151	7.0%
Walk	1887	1.9%
Bike	373	0.4%
Auto/Van/Truck Driver	85476	83.9%
Auto/Van/Truck Passenger	1223	1.2%
Bus / Public Transit	4073	4.0%
Other, SPECIFY	1265	1.2%
Don't Know	113	0.1%
Refused	324	0.3%
Total	101884	100.0%

MRPC-62: Mode to School (Weighted)

Mode to School	Count	Percent
Home schooled	1141	2.2%
Walk	1542	3.0%
Auto/Van/Truck Driver	11218	21.8%
Auto/Van/Truck Passenger	14532	28.3%
Bus / Public Transit	1019	2.0%
School Bus	20743	40.4%
Other, SPECIFY	949	1.8%
Don't Know	241	0.5%
Total	51386	100.0%

Survey Results for Berkshire MPO (BRPC)

Household Characteristics

BRPC-1: Household Size (Weighted) – HHSIZ

Household Size	Count	Percent
1	17639	31.7%
2	21634	38.9%
3	7621	13.7%
4	6604	11.9%
5	1423	2.6%
6	701	1.3%
Total	55623	100.0%

BRPC-2: Transit Used on Regular Basis (Weighted) –RIBUS

Transit Used on Regular Basis	Count	Percent
Yes	6240	11.2%
No	49263	88.6%
DK	120	0.2%
Total	55623	100.0%

BRPC-3: Household Bicycles (Weighted) – HHBIC

Household Bicycles	Count	Percent
0	24330	43.7%
1	10374	18.7%
2	9458	17.0%
3	5033	9.0%
4	3664	6.6%
5	1248	2.2%
6	1130	2.0%
7	200	0.4%
8	186	0.3%
Total	55623	100.0%

BRPC-4: Household Number of Vehicles (Weighted)-HHVEH

Household Vehicles	Count	Percent
0	4805	8.6%
1	21362	38.4%
2	20654	37.1%
3	5762	10.4%
4	1895	3.4%
5	742	1.3%
6	217	0.4%
7	185	0.3%
8 or More	55623	100.0%
Total	4805	8.6%

BRPC-5: Household Ethnicity (Weighted)-RACE

Household Ethnicity	Count	Percent
White Alone	51658	92.9%
Black or African American Alone	201	0.4%
American Indian or Alaskan Native Alone	754	1.4%
Asian Alone	201	0.4%
Native Hawaiian, Pacific Islander Alone	678	1.2%
Some Other Race Alone	1613	2.9%
Two or More Races	519	0.9%
Refused	55623	100.0%
Total	51658	92.9%

BRPC-6: Hispanic or Latino Households (Weighted) – HISP

Hispanic or Latino Household	Count	Percent
Yes	915	1.6%
No	54708	98.4%
RF	55623	100.0%
Total	915	1.6%

BRPC-7: Household Residence Type (Weighted)-RESTY

Household Residence Type	Count	Percent
Single Family Detached Dwelling	39686	71.3%
Building with 2-4 Units	10515	18.9%
Building with 5-19 Units	3530	6.3%
Building with 20 or More Units	1892	3.4%
Total	55623	100.0%

BRPC-8: Ownership of Household Residence (Weighted) – OWN

Home Ownership	Count	Percent
Own/Mortgaged	41271	74.2%
Renter	13759	24.7%
Other, Specify	186	0.3%
DK	140	0.3%
RF	266	0.5%
Total	55623	100.0%

BRPC-9: Cell phone lines in Household (Weighted) – CPLNS

Cell Phones in Household	Count	Percent
0	4370	7.9%
1	23198	41.7%
2	19314	34.7%
3	4742	8.5%
4	3154	5.7%
5	845	1.5%
Total	55623	100.0%

BRPC-10: Landlines in Household (Weighted)-PHLNS

Landlines in Household	Count	Percent
0	378	0.7%
1	50785	91.3%
2	3576	6.4%
3	678	1.2%
4	207	0.4%
Total	55623	100.0%

BRPC-11: Fax Lines in Household (Weighted) – FXLNS

Fax Lines in Household	Count	Percent
0	2850	63.9%
1	1610	36.1%
Total	4461	100.0%

BRPC-12: Household Income (Weighted) – INCOME

Household Income	Count	Percent
Less than $15,000	8357	15.0%
$15,000-$24,999	6458	11.6%
$25,000-$34,999	6480	11.7%
$35,000-$49,999	8800	15.8%
$50,000-$74,999	9686	17.4%
$75,000-$99,999	7676	13.8%
$100,000-$149,999	3138	5.6%
$150,000 or more	3178	5.7%
Don't Know/Refused	1849	3.3%
Total	55623	100.0%

BRPC-13: Trips Made by Household on Travel Day (Weighted) – HTRIPS

Trips Made by Household on Travel Day	Count	Percent
None	2970	5.3%
1 to 5	19626	35.3%
6 to 10	16140	29.0%
11 to 15	8925	16.0%
16 to 20	4450	8.0%
21 to 30	2917	5.2%
31 to 50	595	1.1%
Total	55623	100.0%

BRPC-14: Household Students (Weighted) – HHSTU

Household Students	Count	Percent
0	38631	69.5%
1	8977	16.1%
2	6484	11.7%
3	1318	2.4%
4	214	0.4%
Total	55623	100.0%

BRPC-15: Household Workers (Weighted) – HHWRK

Household Workers	Count	Percent
0	16913	30.4%
1	22348	40.2%
2	13221	23.8%
3	2674	4.8%
4	467	0.8%
Total	55623	100.0%

BRPC-16: Licensed Drivers in Household (Weighted) –HHLIC

Licensed Drivers in Household	Count	Percent
0	3841	6.9%
1	19556	35.2%
2	27689	49.8%
3	3303	5.9%
4	1234	2.2%
Total	55623	100.0%

BRPC-17: Distribution of Households by Day of Week of Travel (Weighted) – DAY

Day of Week of Travel	Count	Percent
Monday	11389	20.5%
Tuesday	10665	19.2%
Wednesday	10296	18.5%
Thursday	9672	17.4%
Friday	13600	24.5%
Total	55623	100.0%

Person Characteristics

BRPC-18: Respondent Gender (Weighted) – GEND

Respondent Gender	Count	Percent
Male	60888	50.2%
Female	60335	49.8%
Total	121224	100.0%

BRPC-19: Age Distribution (Weighted) –AGE

Age Distribution	Count	Percent
Younger than 20	25077	20.7%
20 to 34 years	23438	19.3%
35 to 54 years	32182	26.5%
55 to 64 years	17921	14.8%
65 years or older	20659	17.0%
Refused Age	1946	1.6%
Total	121224	100.0%

BRPC-20: Valid Driver's License (Weighted)- LIC

Valid Driver's License	Count	Percent
Yes	88474	86.4%
No	13949	13.6%
Total	102423	100.0%

BRPC-21: Respondent has Transit Pass (Weighted) – TRANS

Respondent has Transit Pass	Count	Percent
Yes	4190	4.1%
No	98232	95.9%
Total	102423	100.0%

BRPC-22: Transit Pass Type (Weighted)- PASST1, PASST2, PASST3

Transit Pass Type, Multiple Response	Count	Percent
Local Bus Pass	1788	42.7%
Charlie Card	217	5.2%
Other, specify	1967	46.9%
Refused	218	5.2%
Total	4190	100.0%

BRPC-23: Worker Status, Computed (Weighted) – WORKS

Worker Status, Computed	Count	Percent
Yes	57965	56.6%
No	44458	43.4%
Total	102423	100.0%

BRPC-24: Employment Status, Non-workers (Weighted) – WKSTAT

Employment Status, Non workers	Count	Percent
Retired	19449	43.7%
Disabled/On Disability Status	7025	15.8%
Homemaker	5965	13.4%
Unemployed but looking for work	4636	10.4%
Unemployed and not looking for work	458	1.0%
Student	6551	14.7%
Other, SPECIFY	374	0.8%
Total	44458	100.0%

BRPC-25: Average Number of Jobs (Weighted)-JOBS

Jobs	Average
Average Number of Jobs	1.16

BRPC-26: Hours Worked per Day (Weighted) - HOURS

Hours Worked per Day	Count	Percent
1	464	0.8%
2	494	0.9%
3	965	1.7%
4	3898	6.7%
5	3144	5.4%
6	5691	9.8%
7	3491	6.0%
8	24390	42.1%
9	4833	8.3%
10	5773	10.0%
11	221	0.4%
12	1428	2.5%
13	78	0.1%
14	989	1.7%
15	436	0.8%
24	127	0.2%
DK	1197	2.1%
RF	347	0.6%
Total	57965	100.0%

BRPC-27: Respondent Average Number of Days Worked Per Week (Weighted) – WDAYS

Days Worked Per Week	Count	Percent
1	722	1.2%
2	2467	4.3%
3	4247	7.3%
4	5921	10.2%
5	37741	65.1%
6	4086	7.0%
7	2700	4.7%
Don't Know	81	0.1%
Total	57965	100.0%

BRPC-28: Telecommute Status (Weighted) - TELEW

Worker Telecommutes	Count	Percent
Yes	10636	18.3%
No	47098	81.3%
Don't Know	230	0.4%
Total	57965	100.0%

BRPC-29: Flexible Work Program Offered at Work (Weighted) – SCHED

Flexible Work Program Offered at Work	Count	Percent
Yes	9385	16.2%
No	46122	79.6%
Don't Know	2457	4.2%
Total	57965	100.0%

BRPC-30: Type of Flexible Work Programs Offered, Multiple Response (Weighted)-FLEXP1, FLEXP2, FLEXP3

Type of Flexible Work Programs Offered, Multiple Response	Count	Percent
9/80 Work Period	562	5.7%
Early Arrival/Departure	3247	33.1%
4/40 Work Week	238	2.4%
Flexible Hours	2604	26.6%
Other, Specify	1697	17.3%
Don't Know	1189	12.1%
Refused	265	2.7%
Total	9801	100.0%

BRPC-31: Respondent Participates in Flexible Work Program (Weighted)-FLEXT

Respondent Participates in Flexible Work Program	Count	Percent
Yes	8140	86.7%
No	618	6.6%
Don't Know	627	6.7%
Total	9385	100.0%

BRPC-32: Disabled License Plate (Weighted)-EDISA

Disabled License Plate	Count	Percent
Yes	7840	6.8%
No	106886	92.8%
Refused	495	0.4%
Total	115221	100.0%

BRPC-33: Disabled Transit Registration (Weighted) –EDIS2

Disabled Transit Registration	Count	Percent
Yes	2385	2.1%
No	112341	97.5%
Refused	495	0.4%
Total	115221	100.0%

BRPC-34: Level of Education Completed (Weighted) –EDUCA

Level of Education Completed	Count	Percent
Not a high school graduate, 12th grade or less. (Includes very young children)	25882	21.4%
High school graduate (high school diploma or GED)	30482	25.1%
Some college credit but no degree	17263	14.2%
Associate or technical school degree	10792	8.9%
Bachelor's or undergraduate degree	19610	16.2%
Graduate Degree (includes professional degrees, MD, DDs, JD)	16286	13.4%
Don't Know	674	0.6%
Refused	234	0.2%
Total	121224	100.0%

BRPC-35: School Enrollment Status (Weighted)-ENROL

School Enrollment Status	Count	Percent
Yes	28250	23.3%
No	92974	76.7%
Total	121224	100.0%

BRPC-36: Full-time / Part-time Student Status (Weighted)-FPTIM

Full-time / Part-time Student Status	Count	Percent
Part-time	4249	15.0%
Full-time	24001	85.0%
Total	28250	100.0%

BRPC-37: Student Grade Level Attends (Weighted)-SCHOL

Student Grade Level	Count	Percent
Daycare	1120	4.0%
Nursery School, Preschool	1548	5.5%
Kindergarten to Grade 8	10223	36.2%
Grade 9 to 12	8576	30.4%
Technical/Vocational School	389	1.4%
Two-year college (community college)	2092	7.4%
4-year college or university	3005	10.6%
Graduate School/Professional	1296	4.6%
Total	28250	100.0%

BRPC-38: Transit Trips Made in Past Week (Weighted)- TTRIP

Transit Trips Made in Past Week	Count	Percent
0	105088	86.7%
1	1164	1.0%
2	2908	2.4%
3	1357	1.1%
4	1797	1.5%
5	298	0.2%
6	825	0.7%
7	780	0.6%
8	526	0.4%
9	390	0.3%
10	1954	1.6%
11	0	0.0%
12	595	0.5%
13	0	0.0%
14	247	0.2%
15	349	0.3%
16	198	0.2%
17	0	0.0%
18	0	0.0%
19	0	0.0%
20	946	0.8%
21	619	0.5%
22	0	0.0%
23	0	0.0%
24	0	0.0%
25	121	0.1%
Don't Know	1062	0.9%
Total	121224	100.0%

BRPC-39: Bike Facilities Available at Work/School (Weighted)- BIKFA

Bike Facilities Available at Work/School	Count	Percent
Yes	34789	42.9%
No	34482	42.5%
Don't Know	9639	11.9%
Refused	2183	2.7%
Total	81092	100.0%

BRPC-40: Days Used Bike for Recreation in Past Week (Weighted)- BIKD1

Days Used Bike for Recreation in Past Week	Count	Percent
0	58281	72.1%
1	5603	6.9%
2	3478	4.3%
3	1099	1.4%
4	401	0.5%
5	272	0.3%
6	354	0.4%
7	694	0.9%
Don't Know	4943	6.1%
Refused	5737	7.1%
Total	80861	100.0%

BRPC-41: Days Used Bike for Transportation in Past Week (Weighted) – BIKD2

Days Used Bike for Transportation in Past Week	Count	Percent
0	65822	81.4%
1	1312	1.6%
2	692	0.9%
3	686	0.8%
4	363	0.4%
5	743	0.9%
6	205	0.3%
7	1024	1.3%
Don't Know	4277	5.3%
Refused	5737	7.1%
Total	80861	100.0%

BRPC-42: Bike Lanes/Trails Used (Weighted) – BIKRD

Bike Lanes/Trails Used for Non-Recreational Purposes	Count	Percent
Off-Road	12240	15.1%
On-Road	17762	22.0%
Both	18098	22.4%
Don't Know	24455	30.2%
Refused	8306	10.3%
Total	80861	100.0%

BRPC-43: Internet was Used on Travel Day in Place of Trips (Weighted)-INUSE

Internet was used on Travel Day in Place of Trips	Count	Percent
Yes	4733	3.9%
No	109268	90.1%
Don't Know	6153	5.1%
Refused	1070	0.9%
Total	121224	100.0%

BRPC-44: Reason for Non-Travel (Weighted)-NOGO

Reason for Non-Travel	Count	Percent
Personally Sick	2260	11.2%
Caretaking Sick Kids	391	1.9%
Caretaking Sick Other	340	1.7%
Homebound Elderly or Disabled	2262	11.2%
Worked at Home for Pay	2367	11.7%
Worked Around Home (Not for Pay)	4396	21.8%
Out of Area	1144	5.7%
Other	7028	34.8%
Total	20189	100.0%

Vehicle Characteristics

BRPC-45: Vehicle Year (Weighted) – YEAR

Vehicle Year	Count	Percent
1964 or older	658	0.7%
1965-1979	977	1.1%
1980-1989	2475	2.7%
1990-1999	16684	18.3%
2000-2003	22093	24.2%
2004-2006	24121	26.4%
2007	5909	6.5%
2008	6684	7.3%
2009	5358	5.9%
2010	5263	5.8%
2011	1120	1.2%
Total	91342	100.0%

BRPC-46: Vehicle Make (Weighted) – MAKE

Vehicle Make	Count	Percent
Acura	132	0.1%
Audi	568	0.6%
BMW	1261	1.3%
Buick	2513	2.7%
Cadillac	302	0.3%
Chevrolet	8125	8.6%
Chrysler	2558	2.7%
Dodge	5814	6.2%
Ford	10969	11.7%
GMC	3570	3.8%
Harley Davidson	1217	1.3%
Honda	10893	11.6%
Hyundai	3896	4.1%
Infiniti	570	0.6%
Jeep	1994	2.1%
Kawasaki	185	0.2%
Kia	945	1.0%
Lexus	929	1.0%
Lincoln	492	0.5%
Mazda	1768	1.9%
Mercedes	479	0.5%
Mercury	1091	1.2%
Mitsubishi	796	0.8%

Nissan	3894	4.1%
Oldsmobile	562	0.6%
Plymouth	333	0.4%
Pontiac	2139	2.3%
Porsche	128	0.1%
Saab	636	0.7%
Saturn	759	0.8%
Scion	178	0.2%
Subaru	5285	5.6%
Suzuki	1114	1.2%
Toyota	11533	12.3%
Volkswagen	2095	2.2%
Volvo	1555	1.7%
Yamaha	252	0.3%
Other, SPECIFY	1912	2.0%
Don't Know	591	0.6%
Total	94034	100.0%

BRPC-47: Vehicle Body Type (Weighted) – BODY

Vehicle Body Type	Count	Percent
Car/Station Wagon	42811	45.5%
Van (any type)	8205	8.7%
SUV	20863	22.2%
Pickup Truck	13655	14.5%
Other type of truck	407	0.4%
Motorcycle	1660	1.8%
Other, SPECIFY	891	0.9%
Refused	5542	5.9%
Total	94034	100.0%

BRPC-48: Vehicle Fuel Type (Weighted) - FUEL

Vehicle Fuel Type	Count	Percent
Gas	90612	96.4%
Diesel	1681	1.8%
Hybrid	1250	1.3%
Flex Fuel	360	0.4%
Don't Know	131	0.1%
Total	94034	100.0%

Place Characteristics

BRPC-49: Primary Trip Purpose (Weighted) – TPURP

Primary Trip Purpose	Count	Percent
All other home activities	268341	45.8%
Work/Job	47151	8.1%
Routine shopping (groceries, clothing, convenience store, HH maintenance)	45846	7.8%
Visit friends/relatives	28712	4.9%
Household errands (bank, dry cleaning, etc.)	22067	3.8%
Work Business Related	21241	3.6%
Eat meal outside of home	19485	3.3%
Attending Class	19477	3.3%
Personal business (visit government office, attorney, accountant)	17612	3.0%
Indoor recreation/entertainment	13712	2.3%
Drop off passenger from car	13347	2.3%
Health care (doctor, dentist)	12973	2.2%
Pick up passenger from car	12432	2.1%
Changed type of transportation	11769	2.0%
Service private vehicle (gas, oil lube, etc.)	7566	1.3%
Outdoor recreation/entertainment	7192	1.2%
Civic/Religious activities	4281	0.7%
Working at home (for pay)	2810	0.5%
Shopping for major purchases or specialty items (appliance, electronics, new vehicle, major HH repairs)	2621	0.4%
Loop trip	2515	0.4%
All other School Activities	2047	0.3%
All other activities at work	1444	0.2%
Other, SPECIFY	959	0.2%
While Traveling -- Other, Specify	0	0.0%
Volunteer Work/Activities	0	0.0%
Total	585602	100.0%

BRPC-50: Total People Traveling in Travel Party, Including Respondent (Weighted) – TOTTR

Total People Traveling	Count	Percent
1 person	255239	57.2%
2 persons	130925	29.3%
3 persons	36630	8.2%
4 persons	13681	3.1%
5 persons	10091	2.3%
Total	446566	100.0%

BRPC-51: Parking Location (Weighted) – PRKTY

Parking Location	Count	Percent
Parking Lot	174540	44.2%
Parking Garage	4116	1.0%
Street	28622	7.2%
Driveway/personal garage	150932	38.2%
Did not park	26583	6.7%
Other, SPECIFY	943	0.2%
Don't Know	9112	2.3%
Refused	380	0.1%
Total	395227	100.0%

BRPC-52: Paid to Park (Weighted) – PRKCS

Paid to Park	Count	Percent
Did not Pay	362668	91.8%
Did Pay, record amount	1269	0.3%
Don't Know	4185	1.1%
Refused	27105	6.9%
Total	395227	100.0%

BRPC-53: How Parking Fare was Paid (Weighted) – PRKHW

How Parking Fare was Paid	Count	Percent
Cash/Credit/Debit Card	896	70.6%
Per-Paid parking Pass	253	19.9%
Employer-Provided Parking Pass	121	9.5%
Total	1269	100.0%

BRPC-54: Toll Road Used on Trip (Weighted) – TOLL (Use a Toll road)?

Use a Toll Road	Count	Percent
Yes	2815	0.7%
No	381482	96.5%
Don't Know	10550	2.7%
Refused	380	0.1%
Total	395227	100.0%

BRPC-55: Toll Road Used (Weighted) – TOLLT (Which Toll road was used)?

Which Toll Road was Used	Count	Percent
Turnpike	2815	100.0%
Total	2815	100.0%

Travel Behavior

BRPC-56: Average Household and Person Trip Rates (Weighted)

	Average Trip Rate
Household	10.6
Person	4.1

BRPC-57: Trip Rates by Household Size (Weighted)

Household Size	Trip Rate
1	4.5
2	8.3
3	13.6
4	17.5
5	22.2
6	26.6
7	24.8
8 or more	29.8
Total	10.6

BRPC-58: Trip Rates by Number of Household Workers (Weighted)

Household Workers	Trip Rate
0	6.6
1	9.7
2	13.1
3	16.8
4	22.0
5	27.2
6	22.7
Total	10.6

BRPC-59: Trip Rates by Household Income (Weighted)

Household Income	Trip Rate
Less than $15,000	8.3
$15,000-$24,999	9.2
$25,000-$34,999	8.4
$35,000-$49,999	9.4
$50,000-$74,999	10.2
$75,000-$99,999	11.4
$100,000-$149,999	13.2
$150,000 or more	13.3
Don't Know/Refused	9.8
Total	10.6

BRPC-60: All Trip Modes (Weighted)

Transportation Mode	Count	Percent
Walk	45027	9.7%
Bike	2205	0.5%
Auto/Van/Truck Driver	292944	63.1%
Auto/Van/Truck Passenger	101832	21.9%
Public Bus	2945	0.6%
Train	443	0.1%
Dial-A-Ride/Paratransit	595	0.1%
Taxi	2205	0.5%
School bus	15607	3.4%
Motorcycle Driver	451	0.1%
Other, SPECIFY	123	0.0%
Total	464378	100.0%

BRPC-61: Mode to Work (Weighted)

Mode to Work	Count	Percent
Works from home	4772	8.2%
Walk	3335	5.8%
Bike	720	1.2%
Auto/Van/Truck Driver	45793	79.0%
Auto/Van/Truck Passenger	2374	4.1%
Bus / Public Transit	440	0.8%
Other, SPECIFY	305	0.5%
Refused	224	0.4%
Total	57965	100.0%

BRPC-62: Mode to School (Weighted)

Mode to School	Count	Percent
Home schooled	1087	3.8%
Walk	559	2.0%
Bike	218	0.8%
Auto/Van/Truck Driver	6233	22.1%
Auto/Van/Truck Passenger	7512	26.6%
Bus / Public Transit	235	0.8%
School Bus	11839	41.9%
Other, SPECIFY	566	2.0%
Total	28250	100.0%

Survey Results for Franklin Transportation Planning Organization (FRCOG)

Household Characteristics

FRCOG-1: Household Size (Weighted) – HHSIZ

Household Size	Count	Percent
1	8369	27.5%
2	11006	36.1%
3	4378	14.4%
4	4256	14.0%
5	1975	6.5%
6	309	1.0%
7	154	0.5%
Total	30447	100.0%

FRCOG-2: Transit Used on Regular Basis (Weighted) –RIBUS

Transit Used on Regular Basis	Count	Percent
Yes	2262	7.4%
No	28185	92.6%
Total	30447	100.0%

FRCOG-3: Household Bicycles (Weighted) – HHBIC

Household Bicycles	Count	Percent
0	11050	36.3%
1	5354	17.6%
2	5655	18.6%
3	3189	10.5%
4	2813	9.2%
5	941	3.1%
6	610	2.0%
7	197	0.6%
8	639	2.1%
Total	30447	100.0%

FRCOG-4: Household Number of Vehicles (Weighted)-HHVEH

Household Vehicles	Count	Percent
0	1190	3.9%
1	11945	39.2%
2	11976	39.3%
3	3153	10.4%
4	1199	3.9%
5	529	1.7%
6	277	0.9%
8 or More	179	0.6%
Total	30447	100.0%

FRCOG-5: Household Ethnicity (Weighted)-RACE

Household Ethnicity	Count	Percent
White Alone	28997	95.2%
Black or African American Alone	170	0.6%
Some Other Race Alone	221	0.7%
Two or More Races	670	2.2%
Refused	389	1.3%
Total	30447	100.0%

FRCOG-6: Hispanic or Latino Households (Weighted) – HISP

Hispanic or Latino Household	Count	Percent
Yes	318	1.0%
No	29939	98.3%
Refused	190	0.6%
Total	30447	100.0%

FRCOG-7: Household Residence Type (Weighted)-RESTY

Household Residence Type	Count	Percent
Single Family Detached Dwelling	21874	71.8%
Building with 2-4 Units	6715	22.1%
Building with 5-19 Units	1483	4.9%
Building with 20 or More Units	374	1.2%
Total	30447	100.0%

FRCOG-8: Ownership of Household Residence (Weighted) – OWN

Home Ownership	Count	Percent
Own/Mortgaged	21461	70.5%
Renter	8986	29.5%
Total	30447	100.0%

FRCOG-9: Cell phone lines in Household (Weighted) – CPLNS

Cell Phones in Household	Count	Percent
0	5675	18.6%
1	10160	33.4%
2	9282	30.5%
3	3130	10.3%
4	1826	6.0%
5	374	1.2%
Total	30447	100.0%

FRCOG-10: Landlines in Household (Weighted)-PHLNS

Landlines in Household	Count	Percent
0	273	0.9%
1	28841	94.7%
2	696	2.3%
3	529	1.7%
4	0	0%
5	107	0.4%
Total	30447	100.0%

FRCOG-11: Fax Lines in Household (Weighted) – FXLNS

Fax Lines in Household	Count	Percent
0	633	47.5%
1	700	52.5%
Total	1333	100.0%

FRCOG-12: Household Income (Weighted) – INCOME

Household Income	Count	Percent
Less than $15,000	3165	10.4%
$15,000-$24,999	4378	14.4%
$25,000-$34,999	4898	16.1%
$35,000-$49,999	4347	14.3%
$50,000-$74,999	5766	18.9%
$75,000-$99,999	4531	14.9%
$100,000-$149,999	1453	4.8%
$150,000 or more	771	2.5%
Don't Know/Refused	1139	3.7%
Total	30447	100.0%

FRCOG-13: Trips Made by Household on Travel Day (Weighted) – HTRIPS

Trips Made by Household on Travel Day	Count	Percent
None	1743	5.7%
1 to 5	9184	30.2%
6 to 10	9050	29.7%
11 to 15	5160	16.9%
16 to 20	3257	10.7%
21 to 30	1578	5.2%
31 to 50	475	1.6%
Total	30447	100.0%

FRCOG-14: Household Students (Weighted) – HHSTU

Household Students	Count	Percent
0	19437	63.8%
1	4376	14.4%
2	3985	13.1%
3	2003	6.6%
4	490	1.6%
5	156	0.5%
Total	30447	100.0%

FRCOG-15: Household Workers (Weighted) – HHWRK

Household Workers	Count	Percent
0	7501	24.6%
1	11211	36.8%
2	9394	30.9%
3	2069	6.8%
4	272	0.9%
Total	30447	100.0%

FRCOG-16: Licensed Drivers in Household (Weighted) –HHLIC

Licensed Drivers in Household	Count	Percent
0	600	2.0%
1	11313	37.2%
2	15185	49.9%
3	2786	9.2%
4	291	1.0%
5	116	0.4%
6	156	0.5%
Total	30447	100.0%

FRCOG-17: Distribution of Households by Day of Week of Travel (Weighted) – DAY

Day of Week of Travel	Count	Percent
Monday	5996	19.7%
Tuesday	6891	22.6%
Wednesday	5643	18.5%
Thursday	5683	18.7%
Friday	6234	20.5%
Total	30447	100.0%

Person Characteristics

FRCOG-18: Respondent Gender (Weighted) – GEND

Respondent Gender	Count	Percent
Male	34908	47.7%
Female	38257	52.3%
Total	73165	100.0%

FRCOG-19: Age Distribution (Weighted) – AGE

Age Distribution	Count	Percent
Younger than 20	17607	24.1%
20 to 34 years	14630	20.0%
35 to 54 years	20559	28.1%
55 to 64 years	9572	13.1%
65 years or older	9194	12.6%
Refused Age	1603	2.2%
Total	73165	100.0%

FRCOG-20: Valid Driver's License (Weighted)-LIC

Valid Driver's License	Count	Percent
Yes	52426	89.9%
No	5859	10.1%
Total	58285	100.0%

FRCOG-21: Respondent has Transit Pass (Weighted) – TRANS

Respondent has Transit Pass	Count	Percent
Yes	2636	4.5%
No	55356	95.0%
Don't Know	293	0.5%
Total	58285	100.0%

FRCOG-22: Transit Pass Type (Weighted)-PASST1, PASST2, PASST3

Transit Pass Type, Multiple Response	Count	Percent
Local Bus Pass	657	24.9%
Link Pass	61	2.3%
Charlie Card	1087	41.2%
Other, specify	633	24.0%
Don't Know	198	7.5%
Total	2636	100.0%

FRCOG-23: Worker Status, Computed (Weighted) – WORKS

Worker Status, Computed	Count	Percent
Yes	37080	63.6%
No	21205	36.4%
Total	58285	100.0%

FRCOG-24: Employment Status, Non-workers (Weighted) – WKSTAT

Employment Status, Non workers	Count	Percent
Retired	7692	36.3%
Disabled/On Disability Status	3721	17.5%
Homemaker	2416	11.4%
Unemployed but looking for work	1863	8.8%
Unemployed and not looking for work	724	3.4%
Student	4543	21.4%
Other, SPECIFY	246	1.2%
Total	21205	100.0%

FRCOG-25: Average Number of Jobs (Weighted)-JOBS

Jobs	Average
Average Number of Jobs	1.19

FRCOG-26: Hours Worked per Day (Weighted) - HOURS

Hours Worked per Day	Count	Percent
1	76	0.2%
2	337	0.9%
3	1397	3.8%
4	2239	6.0%
5	2490	6.7%
6	3919	10.6%
7	3674	9.9%
8	14389	38.8%
9	2883	7.8%
10	3171	8.6%
11	208	0.6%
12	1605	4.3%
13	132	0.4%
14	447	1.2%
16	56	0.2%
RF	58	0.2%
Total	37080	100.0%

FRCOG-27: Respondent Average Number of Days Worked Per Week (Weighted) – WDAYS

Days Worked Per Week	Count	Percent
1	475	1.3%
2	1314	3.5%
3	3228	8.7%
4	4330	11.7%
5	23151	62.4%
6	3348	9.0%
7	1026	2.8%
Don't Know	207	0.6%
Total	37080	100.0%

FRCOG-28: Telecommute Status (Weighted) - TELEW

Worker Telecommutes	Count	Percent
Yes	5941	16.0%
No	30726	82.9%
Don't Know	413	1.1%
Total	37080	100.0%

FRCOG-29: Flexible Work Program Offered at Work (Weighted) – SCHED

Flexible Work Program Offered at Work	Count	Percent
Yes	7277	19.6%
No	28499	76.9%
Don't Know	1304	3.5%
Total	37080	100.0%

FRCOG-30: Type of Flexible Work Programs Offered, Multiple Response (Weighted)- FLEXP1, FLEXP2, FLEXP3

Type of Flexible Work Programs Offered, Multiple Response	Count	Percent
9/80 Work Period	282	3.6%
Early Arrival/Departure	2558	32.6%
4/40 Work Week	686	8.7%
Flexible Hours	2052	26.2%
Other, Specify	841	10.7%
Don't Know	1040	13.3%
Refused	382	4.9%
Total	7841	100.0%

FRCOG-31: Respondent Participates in Flexible Work Program (Weighted)-FLEXT

Respondent Participates in Flexible Work Program	Count	Percent
Yes	5541	76.1%
No	1628	22.4%
Don't Know	108	1.5%
Total	7277	100.0%

FRCOG-32: Disabled License Plate (Weighted)- EDISA

Disabled License Plate	Count	Percent
Yes	4266	6.1%
No	65295	93.5%
Refused	253	0.4%
Total	69814	100.0%

FRCOG-33: Disabled Transit Registration (Weighted) –EDIS2

Disabled Transit Registration	Count	Percent
Yes	1863	2.7%
No	67544	96.7%
Don't Know	154	0.2%
Refused	253	0.4%
Total	69814	100.0%

FRCOG-34: Level of Education Completed (Weighted) –EDUCA

Level of Education Completed	Count	Percent
Not a high school graduate, 12th grade or less. (Includes very young children)	19172	26.2%
High school graduate (high school diploma or GED)	15558	21.3%
Some college credit but no degree	8140	11.1%
Associate or technical school degree	6405	8.8%
Bachelor's or undergraduate degree	13200	18.0%
Graduate Degree (includes professional degrees, MD, DDs, JD)	10538	14.4%
Don't Know	152	0.2%
Total	73165	100.0%

FRCOG-35: School Enrollment Status (Weighted)-ENROL

School Enrollment Status	Count	Percent
Yes	22571	30.9%
No	50593	69.1%
Total	73165	100.0%

FRCOG-36: Full-time / Part-time Student Status (Weighted)-FPTIM

Full-time / Part-time Student Status	Count	Percent
Part-time	4103	18.2%
Full-time	18469	81.8%
Total	22571	100.0%

FRCOG-37: Student Grade Level Attends (Weighted)-SCHOL

Student Grade Level	Count	Percent
Daycare	160	0.7%
Nursery School, Preschool	673	3.0%
Kindergarten to Grade 8	10459	46.3%
Grade 9 to 12	4915	21.8%
Technical/Vocational School	124	0.5%
Two-year college (community college)	3756	16.6%
4-year college or university	1198	5.3%
Graduate School/Professional	1286	5.7%
Total	22571	100.0%

FRCOG-38: Transit Trips Made in Past Week (Weighted)- TTRIP

Transit Trips Made in Past Week	Count	Percent
0	63736	87.1%
1	265	0.4%
2	1569	2.1%
3	305	0.4%
4	1384	1.9%
5	662	0.9%
6	805	1.1%
7	272	0.4%
8	295	0.4%
10	470	0.6%
12	1174	1.6%
14	856	1.2%
16	274	0.4%
20	133	0.2%
30	206	0.3%
Don't Know	758	1.0%
Total	73165	100.0%

FRCOG-39: Bike Facilities Available at Work/School (Weighted)- BIKFA

Bike Facilities Available at Work/School	Count	Percent
Yes	29507	53.6%
No	19954	36.2%
Don't Know	4612	8.4%
Refused	991	1.8%
Total	55064	100.0%

FRCOG-40: Days Used Bike for Recreation in Past Week (Weighted)- BIKD1

Days Used Bike for Recreation in Past Week	Count	Percent
0	36097	65.2%
1	4312	7.8%
2	2828	5.1%
3	2398	4.3%
4	468	0.8%
5	556	1.0%
6	125	0.2%
7	659	1.2%
Don't Know	5532	10.0%
Refused	2427	4.4%
Total	55400	100.0%

FRCOG-41: Days Used Bike for Transportation in Past Week (Weighted) – BIKD2

Days Used Bike for Transportation in Past Week	Count	Percent
0	43886	79.2%
1	860	1.6%
2	763	1.4%
3	755	1.4%
4	137	0.2%
5	370	0.7%
6	420	0.8%
7	74	0.1%
Don't Know	5708	10.3%
Refused	2427	4.4%
Total	55400	100.0%

FRCOG-42: Bike Lanes/Trails Used (Weighted) – BIKRD

Bike Lanes/Trails Used for Non-Recreational Purposes	Count	Percent
Off-Road	4409	8.0%
On-Road	15787	28.5%
Both	12364	22.3%
Don't Know	18422	33.3%
Refused	4418	8.0%
Total	55400	100.0%

FRCOG-43: Internet was Used on Travel Day in Place of Trips (Weighted)-INUSE

Internet was used on Travel Day in Place of Trips	Count	Percent
Yes	3658	5.0%
No	66218	90.5%
Don't Know	3288	4.5%
Total	73165	100.0%

FRCOG-44: Reason for Non-Travel (Weighted)-NOGO

Reason for Non-Travel	Count	Percent
Personally Sick	1340	15.4%
Homebound Elderly or Disabled	1150	13.2%
Worked at Home for Pay	338	3.9%
Worked Around Home (Not for Pay)	1735	20.0%
Out of Area	413	4.8%
Other, SPECIFY	3711	42.7%
Total	8688	100.0%

Vehicle Characteristics

FRCOG-45: Vehicle Year (Weighted) – YEAR

Vehicle Year	Count	Percent
1964 or older	159	0.3%
1965-1979	627	1.1%
1980-1989	1409	2.6%
1990-1999	14048	25.7%
2000-2003	14742	27.0%
2004-2006	11627	21.3%
2007	3258	6.0%
2008	2873	5.3%
2009	2066	3.8%
2010	3165	5.8%
2011	660	1.2%
Total	54635	100.0%

FRCOG-46: Vehicle Make (Weighted) – MAKE

Vehicle Make	Count	Percent
Acura	133	0.2%
Audi	183	0.3%
BMW	413	0.7%
Buick	946	1.7%
Cadillac	218	0.4%
Chevrolet	5771	10.3%
Chrysler	1046	1.9%
Dodge	2830	5.1%
Ford	5026	9.0%
Geo	233	0.4%
GMC	2075	3.7%
Harley Davidson	594	1.1%
Honda	6426	11.5%
Hyundai	2559	4.6%
Infiniti	81	0.1%
Isuzu	114	0.2%
Jaguar	82	0.1%
Jeep	1551	2.8%
Kawasaki	80	0.1%
Kia	319	0.6%
Lexus	103	0.2%
Lincoln	87	0.2%
Mazda	918	1.6%
Mercedes	521	0.9%
Mercury	251	0.4%

Vehicle Make	Count	Percent
Mitsubishi	125	0.2%
Nissan	1989	3.6%
Oldsmobile	371	0.7%
Plymouth	301	0.5%
Pontiac	684	1.2%
Saab	750	1.3%
Saturn	1299	2.3%
Subaru	3385	6.1%
Suzuki	257	0.5%
Toyota	9462	16.9%
Volkswagen	1675	3.0%
Volvo	1357	2.4%
Yamaha	643	1.2%
Other, SPECIFY	1026	1.8%
Total	55885	100.0%

FRCOG-47: Vehicle Body Type (Weighted) – BODY

Vehicle Body Type	Count	Percent
Car/Station Wagon	26029	46.6%
Van (any type)	4065	7.3%
SUV	12106	21.7%
Pickup Truck	8477	15.2%
Other type of truck	237	0.4%
RV	381	0.7%
Motorcycle	1539	2.8%
Other, Specify	156	0.3%
Refused	2896	5.2%
Total	55885	100.0%

FRCOG-48: Vehicle Fuel Type (Weighted) - FUEL

Vehicle Fuel Type	Count	Percent
Gas	53110	95.0%
Diesel	1952	3.5%
Hybrid	559	1.0%
Flex Fuel	264	0.5%
Total	55885	100.0%

Place Characteristics

FRCOG-49: Primary Trip Purpose (Weighted) – TPURP

Primary Trip Purpose	Count	Percent
All other home activities	161678	45.9%
Work/Job	28514	8.1%
Routine shopping (groceries, clothing, convenience store, HH maintenance)	27468	7.8%
Visit friends/relatives	15237	4.3%
Drop off passenger from car	13638	3.9%
Attending Class	13005	3.7%
Eat meal outside of home	12345	3.5%
Household errands (bank, dry cleaning, etc.)	10537	3.0%
Work Business Related	10526	3.0%
Indoor recreation/entertainment	9169	2.6%
Personal business (visit government office, attorney, accountant)	8881	2.5%
Pick up passenger from car	8763	2.5%
Outdoor recreation/entertainment	8150	2.3%
Changed type of transportation	6081	1.7%
Health care (doctor, dentist)	3934	1.1%
Service private vehicle (gas, oil lube, etc.)	3030	0.9%
Working at home (for pay)	2577	0.7%
Civic/Religious activities	2308	0.7%
All other School Activities	1654	0.5%
Loop trip	1337	0.4%
All other activities at work	1188	0.3%
Other, SPECIFY	1050	0.3%
Shopping for major purchases or specialty items (appliance, electronics, new vehicle, major HH repairs)	861	0.2%
While Traveling -- Other, Specify	0	0.0%
Volunteer Work/Activities	0	0.0%
Total	351930	100.0%

FRCOG-50: Total People Traveling in Travel Party, Including Respondent (Weighted) – TOTTR

Total People Traveling	Count	Percent
1 person	149378	55.4%
2 persons	68918	25.6%
3 persons	38451	14.3%
4 persons	11433	4.2%
5 persons	1511	0.6%
Total	269690	100.0%

FRCOG-51: Parking Location (Weighted) – PRKTY

Parking Location	Count	Percent
Parking Lot	106506	43.8%
Parking Garage	1058	0.4%
Street	21951	9.0%
Driveway/personal garage	88592	36.4%
Did not park	22777	9.4%
Other, SPECIFY	819	0.3%
Don't Know	333	0.1%
Refused	1186	0.5%
Total	243222	100.0%

FRCOG-52: Paid to Park (Weighted) – PRKCS

Paid to Park	Count	Percent
Did not Pay	216293	88.9%
Did Pay, record amount	3300	1.4%
Don't Know	348	0.1%
Refused	23281	9.6%
Total	243222	100.0%

FRCOG-53: How Parking Fare was Paid (Weighted) – PRKHW

How Parking Fare was Paid	Count	Percent
Cash/Credit/Debit Card	3026	91.7%
Per-Paid parking Pass	76	2.3%
Employer-Provided Parking Pass	94	2.8%
Refused	104	3.2%
Total	3300	100.0%

FRCOG-54: Toll Road Used on Trip (Weighted) – TOLL (Use a Toll road)?

Use a Toll Road	Count	Percent
Yes	811	0.3%
No	234004	96.2%
Don't Know	7353	3.0%
Refused	1054	0.4%
Total	243222	100.0%

FRCOG-55: Toll Road Used (Weighted) – TOLLT (Which Toll road was used)?

Which Toll Road was Used	Count	Percent
Turnpike	811	100.0%
Total	811	100.0%

Travel Behavior

FRCOG-56: Average Household and Person Trip Rates (Weighted)

	Average Trip Rate
Household	10.6
Person	4.1

FRCOG-57: Trip Rates by Household Size (Weighted)

Household Size	Trip Rate
1	4.5
2	8.3
3	13.6
4	17.5
5	22.2
6	26.6
7	24.8
8 or more	29.8
Total	10.6

FRCOG-58: Trip Rates by Number of Household Workers (Weighted)

Household Workers	Trip Rate
0	6.6
1	9.7
2	13.1
3	16.8
4	22.0
5	27.2
6	22.7
Total	10.6

FRCOG-59: Trip Rates by Household Income (Weighted)

Household Income	Trip Rate
Less than $15,000	8.3
$15,000-$24,999	9.2
$25,000-$34,999	8.4
$35,000-$49,999	9.4
$50,000-$74,999	10.2
$75,000-$99,999	11.4
$100,000-$149,999	13.2
$150,000 or more	13.3
Don't Know/Refused	9.8
Total	10.6

FRCOG-60: All Trip Modes (Weighted)

Transportation Mode	Count	Percent
Walk	20112	7.2%
Bike	4363	1.6%
Auto/Van/Truck Driver	182417	65.4%
Auto/Van/Truck Passenger	59790	21.4%
Public Bus	1157	0.4%
Dial-A-Ride/Paratransit	268	0.1%
Taxi	1658	0.6%
School bus	7417	2.7%
Motorcycle Driver	1016	0.4%
Other, SPECIFY	568	0.2%
Total	278766	100.0%

FRCOG-61: Mode to Work (Weighted)

Mode to Work	Count	Percent
Works from home	2731	7.4%
Walk	972	2.6%
Bike	106	0.3%
Auto/Van/Truck Driver	29757	80.3%
Auto/Van/Truck Passenger	2287	6.2%
Bus / Public Transit	614	1.7%
Other, SPECIFY	507	1.4%
Refused	105	0.3%
Total	37080	100.0%

FRCOG-62: Mode to School (Weighted)

Mode to School	Count	Percent
Home schooled	1233	5.5%
Walk	994	4.4%
Bike	1019	4.5%
Auto/Van/Truck Driver	4451	19.7%
Auto/Van/Truck Passenger	8412	37.3%
Bus / Public Transit	469	2.1%
School Bus	5004	22.2%
Other, SPECIFY	609	2.7%
Don't Know	378	1.7%
Total	22571	100.0%

Survey Results for Martha's Vineyard MPO (MVC)

Household Characteristics

MVC-1: Household Size (Weighted) – HHSIZ

Household Size	Count	Percent
1	1325	24.0%
2	2979	53.9%
3	336	6.1%
4	699	12.6%
5	83	1.5%
6	0	0%
7	108	2.0%
Total	5530	100.0%

MVC-2: Transit Used on Regular Basis (Weighted) –RIBUS

Transit Used on Regular Basis	Count	Percent
Yes	1045	18.9%
No	4325	78.2%
Don't Know	160	2.9%
Total	5530	100.0%

MVC-3: Household Bicycles (Weighted) – HHBIC

Household Bicycles	Count	Percent
0	831	15.0%
1	1028	18.6%
2	1643	29.7%
3	248	4.5%
4	1040	18.8%
5	521	9.4%
6	220	4.0%
Total	5530	100.0%

MVC-4: Household Number of Vehicles (Weighted)-HHVEH

Household Vehicles	Count	Percent
1	1687	30.5%
2	2717	49.1%
3	791	14.3%
4	215	3.9%
7	121	2.2%
Total	5530	100.0%

MVC-5: Household Ethnicity (Weighted)-RACE

Household Ethnicity	Count	Percent
White Alone	5239	94.7%
American Indian or Alaskan Native Alone	107	1.9%
Refused	183	3.3%
Total	5530	100.0%

MVC-6: Hispanic or Latino Households (Weighted) – HISP

Hispanic or Latino Household	Count	Percent
Yes	310	5.6%
No	5036	91.1%
Refused	183	3.3%
Total	5530	100.0%

MVC-7: Household Residence Type (Weighted)-RESTY

Household Residence Type	Count	Percent
Single Family Detached Dwelling	5079	91.8%
Building with 2-4 Units	451	8.2%
Total	5530	100.0%

MVC-8: Ownership of Household Residence (Weighted) – OWN

Home Ownership	Count	Percent
Own/Mortgaged	4993	90.3%
Renter	537	9.7%
Total	5530	100.0%

MVC-9: Cell phone lines in Household (Weighted) – CPLNS

Cell Phones in Household	Count	Percent
0	499	9.0%
1	1319	23.9%
2	3101	56.1%
3	301	5.4%
4	201	3.6%
5	108	2.0%
Total	5530	100.0%

MVC-10: Landlines in Household (Weighted)-PHLNS

Landlines in Household	Count	Percent
1	4912	88.8%
2	618	11.2%
Total	5530	100.0%

MVC-11: Fax Lines in Household (Weighted) – FXLNS

Fax Lines in Household	Count	Percent
0	451	73.0%
1	167	27.0%
Total	618	100.0%

MVC-12: Household Income (Weighted) – INCOME

Household Income	Count	Percent
Less than $15,000	317	5.7%
$15,000-$24,999	310	5.6%
$25,000-$34,999	316	5.7%
$35,000-$49,999	1336	24.2%
$50,000-$74,999	1277	23.1%
$75,000-$99,999	910	16.5%
$100,000-$149,999	414	7.5%
$150,000 or more	137	2.5%
Don't Know/Refused	511	9.2%
Total	5530	100.0%

MVC-13: Trips Made by Household on Travel Day (Weighted) – HTRIPS

Trips Made by Household on Travel Day	Count	Percent
1 to 5	1900	34.4%
6 to 10	1752	31.7%
11 to 15	803	14.5%
16 to 20	268	4.8%
21 to 30	807	14.6%
Total	5530	100.0%

MVC-14: Household Students (Weighted) – HHSTU

Household Students	Count	Percent
0	4516	81.7%
1	282	5.1%
2	541	9.8%
3	191	3.5%
Total	5530	100.0%

MVC-15: Household Workers (Weighted) – HHWRK

Household Workers	Count	Percent
0	1496	27.1%
1	1735	31.4%
2	2109	38.1%
3	190	3.4%
Total	5530	100.0%

MVC-16: Licensed Drivers in Household (Weighted) –HHLIC

Licensed Drivers in Household	Count	Percent
1	1829	33.1%
2	3258	58.9%
3	336	6.1%
4	108	2.0%
Total	5530	100.0%

MVC-17: Distribution of Households by Day of Week of Travel (Weighted) – DAY

Day of Week of Travel	Count	Percent
Monday	1950	35.3%
Tuesday	647	11.7%
Wednesday	952	17.2%
Thursday	729	13.2%
Friday	1252	22.6%
Total	5530	100.0%

Person Characteristics

MVC-18: Respondent Gender (Weighted) – GEND

Respondent Gender	Count	Percent
Male	5465	44.3%
Female	6881	55.7%
Total	12346	100.0%

MVC-19: Age Distribution (Weighted) –AGE

Age Distribution	Count	Percent
Younger than 20	1896	15.4%
20 to 34 years	2316	18.8%
35 to 54 years	2905	23.5%
55 to 64 years	1898	15.4%
65 years or older	2653	21.5%
Refused Age	678	5.5%
Total	12346	100.0%

MVC-20: Valid Driver's License (Weighted)- LIC

Valid Driver's License	Count	Percent
Yes	9967	94.3%
No	598	5.7%
Total	10564	100.0%

MVC-21: Respondent has Transit Pass (Weighted) – TRANS

Respondent has Transit Pass	Count	Percent
Yes	506	4.8%
No	10058	95.2%
Total	10564	100.0%

MVC-22: Transit Pass Type (Weighted)- PASST1, PASST2, PASST3

Transit Pass Type, Multiple Response	Count	Percent
Local Bus Pass	114	22.5%
Ferry / Board Pass	392	77.5%
Total	506	100.0%

MVC-23: Worker Status, Computed (Weighted) – WORKS

Worker Status, Computed	Count	Percent
Yes	6507	61.6%
No	4057	38.4%
Total	10564	100.0%

MVC-24: Employment Status, Non-workers (Weighted) – WKSTAT

Employment Status, Non workers	Count	Percent
Retired	2540	62.6%
Disabled/On Disability Status	292	7.2%
Homemaker	435	10.7%
Unemployed but looking for work	677	16.7%
Student	114	2.8%
Total	4057	100.0%

MVC-25: Average Number of Jobs (Weighted)-JOBS

Jobs	Average
Average Number of Jobs	1.13

MVC-26: Hours Worked per Day (Weighted) - HOURS

Hours Worked per Day	Count	Percent
1	61	0.9%
2	103	1.6%
3	261	4.0%
4	200	3.1%
5	277	4.3%
6	644	9.9%
7	564	8.7%
8	2477	38.1%
9	571	8.8%
10	918	14.1%
12	74	1.1%
15	98	1.5%
Don't Know	261	4.0%
Total	6507	100.0%

MVC-27: Respondent Average Number of Days Worked Per Week (Weighted) – WDAYS

Days Worked Per Week	Count	Percent
1	168	2.6%
4	438	6.7%
5	3476	53.4%
6	1456	22.4%
7	969	14.9%
Total	6507	100.0%

MVC-28: Telecommute Status (Weighted) - TELEW

Worker Telecommutes	Count	Percent
Yes	1707	26.2%
No	4800	73.8%
Total	6507	100.0%

MVC-29: Flexible Work Program Offered at Work (Weighted) – SCHED

Flexible Work Program Offered at Work	Count	Percent
Yes	1753	26.9%
No	4646	71.4%
Refused	107	1.6%
Total	6507	100.0%

MVC-30: Type of Flexible Work Programs Offered, Multiple Response (Weighted)- FLEXP1, FLEXP2, FLEXP3

Type of Flexible Work Programs Offered, Multiple Response	Count	Percent
9/80 Work Period	0	0%
Early Arrival/Departure	368	21.0%
4/40 Work Week	0	0%
Flexible Hours	415	23.7%
Other, Specify	658	37.5%
Don't Know	146	8.4%
Refused	166	9.5%
Total	1753	100.0%

MVC-31: Respondent Participates in Flexible Work Program (Weighted)-FLEXT

Respondent Participates in Flexible Work Program	Count	Percent
Yes	1479	84.3%
No	275	15.7%
Total	1753	100.0%

MVC-32: Disabled License Plate (Weighted)- EDISA

Disabled License Plate	Count	Percent
Yes	1951	16.5%
No	9885	83.5%
Total	11836	100.0%

MVC-33: Disabled Transit Registration (Weighted) –EDIS2

Disabled Transit Registration	Count	Percent
Yes	133	1.1%
No	11702	98.9%
Total	11836	100.0%

MVC-34: Level of Education Completed (Weighted) –EDUCA

Level of Education Completed	Count	Percent
Not a high school graduate, 12th grade or less. (Includes very young children)	1896	15.4%
High school graduate (high school diploma or GED)	3787	30.7%
Some college credit but no degree	1407	11.4%
Associate or technical school degree	1001	8.1%
Bachelor's or undergraduate degree	2185	17.7%
Graduate Degree (includes professional degrees, MD, DDs, JD)	2070	16.8%
Total	12346	100.0%

MVC-35: School Enrollment Status (Weighted)-ENROL

School Enrollment Status	Count	Percent
Yes	1961	15.9%
No	10386	84.1%
Total	12346	100.0%

MVC-36: Full-time / Part-time Student Status (Weighted)-FPTIM

Full-time / Part-time Student Status	Count	Percent
Part-time	755	38.5%
Full-time	1205	61.5%
Total	1961	100.0%

MVC-37: Student Grade Level Attends (Weighted)-SCHOL

Student Grade Level	Count	Percent
Nursery School, Preschool	103	5.3%
Kindergarten to Grade 8	1225	62.5%
Grade 9 to 12	264	13.5%
Two-year college (community college)	128	6.5%
Graduate School/Professional	241	12.3%
Total	1961	100.0%

MVC-38: Transit Trips Made in Past Week (Weighted)- TTRIP

Transit Trips Made in Past Week	Count	Percent
0	8686	70.4%
2	1425	11.5%
3	150	1.2%
5	638	5.2%
6	587	4.8%
10	255	2.1%
14	395	3.2%
16	78	0.6%
20	133	1.1%
Total	12346	100.0%

MVC-39: Bike Facilities Available at Work/School (Weighted)- BIKFA

Bike Facilities Available at Work/School	Count	Percent
Yes	5336	65.9%
No	2086	25.8%
Don't Know	616	7.6%
Refused	61	0.7%
Total	8099	100.0%

MVC-40: Days Used Bike for Recreation in Past Week (Weighted)- BIKD1

Days Used Bike for Recreation in Past Week	Count	Percent
0	8007	73.7%
1	1068	9.8%
2	357	3.3%
4	125	1.1%
5	205	1.9%
7	249	2.3%
Don't Know	856	7.9%
Total	10866	100.0%

MVC-41: Days Used Bike for Transportation in Past Week (Weighted) – BIKD2

Days Used Bike for Transportation in Past Week	Count	Percent
0	8700	80.1%
1	639	5.9%
2	173	1.6%
5	250	2.3%
7	249	2.3%
Don't Know	856	7.9%
Total	10866	100.0%

MVC-42: Bike Lanes/Trails Used (Weighted) – BIKRD

Bike Lanes/Trails Used for Non-Recreational Purposes	Count	Percent
Off-Road	1722	15.8%
On-Road	2132	19.6%
Both	3336	30.7%
Don't Know	2785	25.6%
Refused	891	8.2%
Total	10866	100.0%

MVC-43: Internet was Used on Travel Day in Place of Trips (Weighted)-INUSE

Internet was used on Travel Day in Place of Trips	Count	Percent
Yes	839	6.8%
No	10875	88.1%
Don't Know	633	5.1%
Total	12346	100.0%

MVC-44: Reason for Non-Travel (Weighted)-NOGO

Reason for Non-Travel	Count	Percent
Personally Sick	797	34.6%
Worked at Home for Pay	365	15.9%
Worked Around Home (Not for Pay)	271	11.8%
Out of Area	128	5.6%
Other SPECIFY	741	32.2%
Total	2302	100.0%

Vehicle Characteristics

MVC-45: Vehicle Year (Weighted) – YEAR

Vehicle Year	Count	Percent
1980-1989	539	4.8%
1990-1999	2987	26.7%
2000-2003	2754	24.6%
2004-2006	2197	19.6%
2007	757	6.8%
2008	543	4.8%
2009	220	2.0%
2010	849	7.6%
2011	351	3.1%
Total	11197	100.0%

MVC-46: Vehicle Make (Weighted) – MAKE

Vehicle Make	Count	Percent
Acura	121	1.1%
BMW	119	1.1%
Buick	121	1.1%
Chevrolet	1347	12.0%
Chrysler	389	3.5%
Dodge	354	3.2%
Ford	486	4.3%
GMC	403	3.6%
Honda	684	6.1%
Hyundai	167	1.5%
Isuzu	577	5.2%
Jeep	285	2.5%
Kia	183	1.6%
Mercury	160	1.4%
Nissan	524	4.7%
Saturn	249	2.2%
Subaru	738	6.6%
Suzuki	107	1.0%
Toyota	3866	34.5%
Volkswagen	102	0.9%
Volvo	216	1.9%
Total	11197	100.0%

MVC-47: Vehicle Body Type (Weighted) – BODY

Vehicle Body Type	Count	Percent
Car/Station Wagon	3523	31.5%
Van (any type)	1562	14.0%
SUV	4109	36.7%
Pickup Truck	1667	14.9%
Other type of truck	121	1.1%
Refused	215	1.9%
Total	11197	100.0%

MVC-48: Vehicle Fuel Type (Weighted) - FUEL

Vehicle Fuel Type	Count	Percent
Gas	11197	100.0%
Total	11197	100.0%

Place Characteristics

MVC-49: Primary Trip Purpose (Weighted) – TPURP

Primary Trip Purpose	Count	Percent
All other home activities	28204	41.7%
Routine shopping (groceries, clothing, convenience store, HH maintenance)	8037	11.9%
Work Business Related	6015	8.9%
Work/Job	5035	7.4%
Household errands (bank, dry cleaning, etc.)	3427	5.1%
Changed type of transportation	2965	4.4%
Outdoor recreation/entertainment	2302	3.4%
Pick up passenger from car	1634	2.4%
Drop off passenger from car	1612	2.4%
Indoor recreation/entertainment	1307	1.9%
Visit friends/relatives	1282	1.9%
Working at home (for pay)	1263	1.9%
Personal business (visit government office, attorney, accountant)	927	1.4%
Attending Class	927	1.4%
Eat meal outside of home	781	1.2%
Health care (doctor, dentist)	650	1.0%
Service private vehicle (gas, oil lube, etc.)	509	0.8%
Shopping for major purchases or specialty items (appliance, electronics, new vehicle, major HH repairs)	368	0.5%
All other School Activities	150	0.2%
Civic/Religious activities	114	0.2%
Loop trip	103	0.2%
Volunteer Work/Activities	61	0.1%
Other, SPECIFY	0	0.0%
While Traveling -- Other, Specify	0	0.0%
All other activities at work	0	0.0%
Total	67671	100.0%

MVC-50: Total People Traveling in Travel Party, Including Respondent (Weighted) – TOTTR

Total People Traveling	Count	Percent
1 person	35639	65.4%
2 persons	14014	25.7%
3 persons	3340	6.1%
4 persons	999	1.8%
5 persons	509	0.9%
Total	54501	100.0%

MVC-51: Parking Location (Weighted) – PRKTY

Parking Location	Count	Percent
Parking Lot	26310	52.3%
Street	2048	4.1%
Driveway/personal garage	18548	36.9%
Did not park	1981	3.9%
Other, SPECIFY	799	1.6%
Don't Know	625	1.2%
Total	50310	100.0%

MVC-52: Paid to Park (Weighted) – PRKCS

Paid to Park	Count	Percent
Did not Pay	48069	95.5%
Don't Know	410	0.8%
Refused	1831	3.6%
Total	50310	100.0%

MVC-53: How Parking Fare was Paid (Weighted) – PRKHW

How Parking Fare was Paid	Count	Percent
Cash/Credit/Debit Card	0	0%
Per-Paid parking Pass	0	0%
Employer-Provided Parking Pass	0	0%
Don't Know	0	0%
Total	0	0%

MVC-54: Toll Road Used on Trip (Weighted) – TOLL (Use a Toll road)?

Use a Toll Road	Count	Percent
Yes	0	0%
No	50034	99.5%
Don't Know	275	0.5%
Refused	0	0%
Total	50310	100.0%

MVC-55: Toll Road Used (Weighted) – TOLLT (Which Toll road was used)?

Which Toll Road was Used	Count	Percent
Turnpike	0	0%
Ted Williams Tunnel	0	0%
Sumner Tunnel	0	0%
Total	0	0%

Travel Behavior

MVC-56: Average Household and Person Trip Rates (Weighted)

	Average Trip Rate
Household	10.6
Person	4.1

MVC-57: Trip Rates by Household Size (Weighted)

Household Size	Trip Rate
1	4.5
2	8.3
3	13.6
4	17.5
5	22.2
6	26.6
7	24.8
8 or more	29.8
Total	10.6

MVC-58: Trip Rates by Number of Household Workers (Weighted)

Household Workers	Trip Rate
0	6.6
1	9.7
2	13.1
3	16.8
4	22.0
5	27.2
6	22.7
Total	10.6

MVC-59: Trip Rates by Household Income (Weighted)

Household Income	Trip Rate
Less than $15,000	8.3
$15,000-$24,999	9.2
$25,000-$34,999	8.4
$35,000-$49,999	9.4
$50,000-$74,999	10.2
$75,000-$99,999	11.4
$100,000-$149,999	13.2
$150,000 or more	13.3
Don't Know/Refused	9.8
Total	10.6

MVC-60: All Trip Modes (Weighted)

Transportation Mode	Count	Percent
Walk	1760	3.2%
Bike	1247	2.3%
Auto/Van/Truck Driver	42240	76.4%
Auto/Van/Truck Passenger	8070	14.6%
Ferry/boat	1083	2.0%
School bus	824	1.5%
Other, SPECIFY	102	0.2%
Total	55325	100.0%

MVC-61: Mode to Work (Weighted)

Mode to Work	Count	Percent
Works from home	798	12.3%
Walk	822	12.6%
Auto/Van/Truck Driver	4886	75.1%
Total	6507	100.0%

MVC-62: Mode to School (Weighted)

Mode to School	Count	Percent
Walk	114	5.8%
Auto/Van/Truck Driver	128	6.5%
Auto/Van/Truck Passenger	1052	53.7%
Bus / Public Transit	241	12.3%
School Bus	425	21.7%
Total	1961	100.0%

Survey Results for Nantucket MPO (NPEDC)

Household Characteristics

NPEDC-1: Household Size (Weighted) – HHSIZ

Household Size	Count	Percent
1	697	19.3%
2	1479	40.8%
3	655	18.1%
4	638	17.6%
5	153	4.2%
Total	3623	100.0%

NPEDC-2: Transit Used on Regular Basis (Weighted) –RIBUS

Transit Used on Regular Basis	Count	Percent
Yes	310	8.5%
No	3313	91.5%
Total	3623	100.0%

NPEDC-3: Household Bicycles (Weighted) – HHBIC

Household Bicycles	Count	Percent
0	431	11.9%
1	334	9.2%
2	1394	38.5%
3	796	22.0%
4	481	13.3%
5	185	5.1%
Total	3623	100.0%

NPEDC-4: Household Number of Vehicles (Weighted)-HHVEH

Household Vehicles	Count	Percent
0	226	6.2%
1	1845	50.9%
2	617	17.0%
3	786	21.7%
4	0	0%
5	150	4.1%
Total	3623	100.0%

NPEDC-5: Household Ethnicity (Weighted)-RACE

Household Ethnicity	Count	Percent
White Alone	3219	88.8%
Black or African American Alone	310	8.5%
Two or More Races	94	2.6%
Total	3623	100.0%

NPEDC-6: Hispanic or Latino Households (Weighted) – HISP

Hispanic or Latino Household	Count	Percent
Yes	0	0%
No	3623	100.0%
Total	3623	100.0%

NPEDC-7: Household Residence Type (Weighted)-RESTY

Household Residence Type	Count	Percent
Single Family Detached Dwelling	3152	87.0%
Building with 2-4 Units	471	13.0%
Total	3623	100.0%

NPEDC-8: Ownership of Household Residence (Weighted) – OWN

Home Ownership	Count	Percent
Own/Mortgaged	2882	79.6%
Renter	741	20.4%
Total	3623	100.0%

NPEDC-9: Cell phone lines in Household (Weighted) – CPLNS

Cell Phones in Household	Count	Percent
0	151	4.2%
1	1260	34.8%
2	1436	39.6%
3	626	17.3%
4	150	4.1%
Total	3623	100.0%

NPEDC-10: Landlines in Household (Weighted)-PHLNS

Landlines in Household	Count	Percent
1	2824	77.9%
2	649	17.9%
3	0	0%
4	0	0%
5	150	4.1%
Total	3623	100.0%

NPEDC-11: Fax Lines in Household (Weighted) – FXLNS

Fax Lines in Household	Count	Percent
0	380	47.6%
1	419	52.4%
Total	799	100.0%

NPEDC-12: Household Income (Weighted) – INCOME

Household Income	Count	Percent
Less than $15,000	1196	33.0%
$15,000-$24,999	0	0%
$25,000-$34,999	0	0%
$35,000-$49,999	529	14.6%
$50,000-$74,999	362	10.0%
$75,000-$99,999	106	2.9%
$100,000-$149,999	423	11.7%
$150,000 or more	818	22.6%
Don't Know/Refused	189	5.2%
Total	3623	100.0%

NPEDC-13: Trips Made by Household on Travel Day (Weighted) – HTRIPS

Trips Made by Household on Travel Day	Count	Percent
1 to 5	984	27.2%
6 to 10	1198	33.1%
11 to 15	641	17.7%
16 to 20	548	15.1%
21 to 30	99	2.7%
31 to 50	153	4.2%
Total	3623	100.0%

NPEDC-14: Household Students (Weighted) – HHSTU

Household Students	Count	Percent
0	2549	70.4%
1	432	11.9%
2	0	0%
3	641	17.7%
Total	3623	100.0%

NPEDC-15: Household Workers (Weighted) – HHWRK

Household Workers	Count	Percent
0	1078	29.7%
1	1476	40.7%
2	758	20.9%
3	311	8.6%
Total	3623	100.0%

NPEDC-16: Licensed Drivers in Household (Weighted) –HHLIC

Licensed Drivers in Household	Count	Percent
0	226	6.2%
1	1486	41.0%
2	1497	41.3%
3	414	11.4%
Total	3623	100.0%

NPEDC-17: Distribution of Households by Day of Week of Travel (Weighted) – DAY

Day of Week of Travel	Count	Percent
Monday	1188	32.8%
Tuesday	150	4.1%
Wednesday	329	9.1%
Thursday	662	18.3%
Friday	1294	35.7%
Total	3623	100.0%

Person Characteristics

NPEDC-18: Respondent Gender (Weighted) – GEND

Respondent Gender	Count	Percent
Male	3967	40.6%
Female	5816	59.4%
Total	9782	100.0%

NPEDC-19: Age Distribution (Weighted) –AGE

Age Distribution	Count	Percent
Younger than 20	2725	27.9%
20 to 34 years	1950	19.9%
35 to 54 years	1335	13.6%
55 to 64 years	1050	10.7%
65 years or older	2722	27.8%
Total	9782	100.0%

NPEDC-20: Valid Driver's License (Weighted)-LIC

Valid Driver's License	Count	Percent
Yes	6096	83.5%
No	1208	16.5%
Total	7303	100.0%

NPEDC-21: Respondent has Transit Pass (Weighted) – TRANS

Respondent has Transit Pass	Count	Percent
Yes	511	7.0%
No	6792	93.0%
Total	7303	100.0%

NPEDC-22: Transit Pass Type (Weighted)- PASST1, PASST2, PASST3

Transit Pass Type, Multiple Response	Count	Percent
Charlie Card	511	100.0%
Total	511	100.0%

NPEDC-23: Worker Status, Computed (Weighted) – WORKS

Worker Status, Computed	Count	Percent
Yes	4342	59.4%
No	2962	40.6%
Total	7303	100.0%

NPEDC-24: Employment Status, Non-workers (Weighted) – WKSTAT

Employment Status, Non workers	Count	Percent
Retired	1784	60.2%
Disabled/On Disability Status	294	9.9%
Homemaker	202	6.8%
Unemployed but looking for work	278	9.4%
Student	403	13.6%
Total	2962	100.0%

NPEDC-25: Average Number of Jobs (Weighted)-JOBS

Jobs	Average
Average Number of Jobs	1.13

NPEDC-26: Hours Worked per Day (Weighted) - HOURS

Hours Worked per Day	Count	Percent
1	0	0%
2	431	9.9%
3	0	0%
4	147	3.4%
5	338	7.8%
6	455	10.5%
7	90	2.1%
8	2023	46.6%
9	368	8.5%
10	425	9.8%
Don't Know	65	1.5%
Total	4342	100.0%

NPEDC-27: Respondent Average Number of Days Worked Per Week (Weighted) – WDAYS

Days Worked Per Week	Count	Percent
1	0	0%
2	0	0%
3	206	4.7%
4	171	3.9%
5	2777	64.0%
6	995	22.9%
7	192	4.4%
Total	4342	100.0%

NPEDC-28: Telecommute Status (Weighted) - TELEW

Worker Telecommutes	Count	Percent
Yes	1280	29.5%
No	3061	70.5%
Total	4342	100.0%

NPEDC-29: Flexible Work Program Offered at Work (Weighted) – SCHED

Flexible Work Program Offered at Work	Count	Percent
Yes	876	20.2%
No	3466	79.8%
Total	4342	100.0%

NPEDC-30: Type of Flexible Work Programs Offered, Multiple Response (Weighted)- FLEXP1, FLEXP2, FLEXP3

Type of Flexible Work Programs Offered, Multiple Response	Count	Percent
9/80 Work Period	92	10.5%
Early Arrival/Departure	405	46.2%
4/40 Work Week	99	11.3%
Flexible Hours	141	16.1%
Other, Specify	139	15.9%
Total	876	100.0%

NPEDC-31: Respondent Participates in Flexible Work Program (Weighted)-FLEXT

Respondent Participates in Flexible Work Program	Count	Percent
Yes	876	100.0%
No	0	0%
Total	876	100.0%

NPEDC-32: Disabled License Plate (Weighted)- EDISA

Disabled License Plate	Count	Percent
Yes	548	5.9%
No	8769	94.1%
Total	9316	100.0%

NPEDC-33: Disabled Transit Registration (Weighted) –EDIS2

Disabled Transit Registration	Count	Percent
Yes	237	2.5%
No	8981	96.4%
Don't Know	99	1.1%
Total	9316	100.0%

NPEDC-34: Level of Education Completed (Weighted) –EDUCA

Level of Education Completed	Count	Percent
Not a high school graduate, 12th grade or less. (Includes very young children)	2626	26.8%
High school graduate (high school diploma or GED)	1802	18.4%
Some college credit but no degree	901	9.2%
Associate or technical school degree	1064	10.9%
Bachelor's or undergraduate degree	1782	18.2%
Graduate Degree (includes professional degrees, MD, DDs, JD)	1608	16.4%
Total	9782	100.0%

NPEDC-35: School Enrollment Status (Weighted)-ENROL

School Enrollment Status	Count	Percent
Yes	2883	29.5%
No	6900	70.5%
Total	9782	100.0%

NPEDC-36: Full-time / Part-time Student Status (Weighted)-FPTIM

Full-time / Part-time Student Status	Count	Percent
Part-time	256	8.9%
Full-time	2626	91.1%
Total	2883	100.0%

NPEDC-37: Student Grade Level Attends (Weighted)-SCHOL

Student Grade Level	Count	Percent
Kindergarten to Grade 8	2160	74.9%
Grade 9 to 12	466	16.2%
Graduate School/Professional	256	8.9%
Total	2883	100.0%

NPEDC-38: Transit Trips Made in Past Week (Weighted)- TTRIP

Transit Trips Made in Past Week	Count	Percent
0	7035	71.9%
2	157	1.6%
4	157	1.6%
5	108	1.1%
7	1398	14.3%
14	829	8.5%
Don't Know	99	1.0%
Total	9782	100.0%

NPEDC-39: Bike Facilities Available at Work/School (Weighted)- BIKFA

Bike Facilities Available at Work/School	Count	Percent
Yes	6310	87.4%
No	708	9.8%
Don't Know	206	2.9%
Total	7224	100.0%

NPEDC-40: Days Used Bike for Recreation in Past Week (Weighted)- BIKD1

Days Used Bike for Recreation in Past Week	Count	Percent
0	4593	50.8%
1	643	7.1%
2	791	8.8%
3	1441	15.9%
4	0	0%
5	221	2.4%
Don't Know	319	3.5%
Refused	1028	11.4%
Total	9036	100.0%

NPEDC-41: Days Used Bike for Transportation in Past Week (Weighted) – BIKD2

Days Used Bike for Transportation in Past Week	Count	Percent
0	5810	64.3%
1	0	0%
2	1122	12.4%
3	0	0%
4	466	5.2%
5	93	1.0%
6	0	0%
7	99	1.1%
Don't Know	513	5.7%
Refused	932	10.3%
Total	9036	100.0%

NPEDC-42: Bike Lanes/Trails Used (Weighted) – BIKRD

Bike Lanes/Trails Used for Non-Recreational Purposes	Count	Percent
Off-Road	1767	19.6%
On-Road	1812	20.1%
Both	1721	19.0%
Don't Know	2525	27.9%
Refused	1211	13.4%
Total	9036	100.0%

NPEDC-43: Internet was Used on Travel Day in Place of Trips (Weighted)-INUSE

Internet was used on Travel Day in Place of Trips	Count	Percent
Yes	711	7.3%
No	8499	86.9%
Don't Know	573	5.9%
Total	9782	100.0%

NPEDC-44: Reason for Non-Travel (Weighted)-NOGO

Reason for Non-Travel	Count	Percent
Personally Sick	443	44.8%
Worked at Home for Pay	99	10.0%
Worked Around Home (Not for Pay)	75	7.5%
Out of Area	373	37.7%
Total	989	100.0%

Vehicle Characteristics

NPEDC-45: Vehicle Year (Weighted) – YEAR

Vehicle Year	Count	Percent
1965-1979	90	1.5%
1990-1999	2214	36.9%
2000-2003	1882	31.4%
2004-2006	1341	22.4%
2007	94	1.6%
2008	280	4.7%
2010	90	1.5%
Total	5993	100.0%

NPEDC-46: Vehicle Make (Weighted) – MAKE

Vehicle Make	Count	Percent
Acura	109	1.8%
BMW	106	1.7%
Chevrolet	621	10.0%
Chrysler	122	2.0%
Dodge	386	6.2%
Ford	1446	23.4%
Geo	103	1.7%
Jeep	623	10.1%
Lexus	131	2.1%
Mercury	390	6.3%
Nissan	229	3.7%
Porsche	300	4.8%
Subaru	288	4.7%
Toyota	1137	18.4%
Volkswagen	90	1.5%
Other, SPECIFY	106	1.7%
Total	6185	100.0%

NPEDC-47: Vehicle Body Type (Weighted) – BODY

Vehicle Body Type	Count	Percent
Car/Station Wagon	723	11.7%
Van (any type)	480	7.8%
SUV	3109	50.3%
Pickup Truck	1299	21.0%
Refused	575	9.3%
Total	6185	100.0%

NPEDC-48: Vehicle Fuel Type (Weighted) - FUEL

Vehicle Fuel Type	Count	Percent
Gas	6185	100.0%
Total	6185	100.0%

NPEDC-49: Primary Trip Purpose (Weighted) – TPURP

Primary Trip Purpose	Count	Percent
All other home activities	22317	44.3%
Drop off passenger from car	4927	9.8%
Routine shopping (groceries, clothing, convenience store, HH maintenance)	4063	8.1%
Attending Class	2455	4.9%
Household errands (bank, dry cleaning, etc.)	2383	4.7%
Work/Job	1898	3.8%
Outdoor recreation/entertainment	1685	3.3%
Personal business (visit government office, attorney, accountant)	1616	3.2%
Indoor recreation/entertainment	1395	2.8%
Changed type of transportation	1224	2.4%
Pick up passenger from car	1208	2.4%
Working at home (for pay)	1202	2.4%
Work Business Related	960	1.9%
Eat meal outside of home	903	1.8%
Health care (doctor, dentist)	572	1.1%
All other School Activities	466	0.9%
Shopping for major purchases or specialty items (appliance, electronics, new vehicle, major HH repairs)	388	0.8%
Visit friends/relatives	358	0.7%
Civic/Religious activities	252	0.5%
Service private vehicle (gas, oil lube, etc.)	90	0.2%
Other, SPECIFY	0	0.0%
Loop trip	0	0.0%
While Traveling -- Other, Specify	0	0.0%
Volunteer Work/Activities	0	0.0%
All other activities at work	0	0.0%
Total	50363	100.0%

NPEDC-50: Total People Traveling in Travel Party, Including Respondent (Weighted) – TOTTR

Total People Traveling	Count	Percent
1 person	16979	42.0%
2 persons	13282	32.9%
3 persons	4822	11.9%
4 persons	4605	11.4%
5 persons	720	1.8%
Total	40409	100.0%

NPEDC-51: Parking Location (Weighted) – PRKTY

Parking Location	Count	Percent
Parking Lot	11283	32.1%
Street	3695	10.5%
Driveway/personal garage	10709	30.5%
Did not park	7921	22.6%
Don't Know	1369	3.9%
Refused	139	0.4%
Total	35116	100.0%

NPEDC-52: Paid to Park (Weighted) – PRKCS

Paid to Park	Count	Percent
Did not Pay	27056	77.0%
Refused	8061	23.0%
Total	35116	100.0%

NPEDC-53: How Parking Fare was Paid (Weighted) – PRKHW

How Parking Fare was Paid	Count	Percent
Cash/Credit/Debit Card	0	0%
Per-Paid parking Pass	0	0%
Employer-Provided Parking Pass	0	0%
Total	0	0%

NPEDC-54: Toll Road Used on Trip (Weighted) – TOLL (Use a Toll road)?

Use a Toll Road	Count	Percent
Yes	0	0%
No	34977	99.6%
Refused	139	0.4%
Total	35116	100.0%

NPEDC-55: Toll Road Used (Weighted) – TOLLT (Which Toll road was used)?

Which Toll Road was Used	Count	Percent
Turnpike	0	0%
Ted Williams Tunnel	0	0%
Sumner Tunnel	0	0%
Tobin Bridge	0	0%
Total	0	0%

Travel Behavior

NPEDC-56: Average Household and Person Trip Rates (Weighted)

	Average Trip Rate
Household	10.6
Person	4.1

NPEDC-57: Trip Rates by Household Size (Weighted)

Household Size	Trip Rate
1	4.5
2	8.3
3	13.6
4	17.5
5	22.2
6	26.6
7	24.8
8 or more	29.8
Total	10.6

NPEDC-58: Trip Rates by Number of Household Workers (Weighted)

Household Workers	Trip Rate
0	6.6
1	9.7
2	13.1
3	16.8
4	22.0
5	27.2
6	22.7
Total	10.6

NPEDC-59: Trip Rates by Household Income (Weighted)

Household Income	Trip Rate
Less than $15,000	8.3
$15,000-$24,999	9.2
$25,000-$34,999	8.4
$35,000-$49,999	9.4
$50,000-$74,999	10.2
$75,000-$99,999	11.4
$100,000-$149,999	13.2
$150,000 or more	13.3
Don't Know/Refused	9.8
Total	10.6

NPEDC-60: All Trip Modes (Weighted)

Transportation Mode	Count	Percent
Walk	4384	10.8%
Bike	445	1.1%
Auto/Van/Truck Driver	22004	54.2%
Auto/Van/Truck Passenger	13113	32.3%
Ferry/boat	463	1.1%
School bus	172	0.4%
Total	40580	100.0%

NPEDC-61: Mode to Work (Weighted)

Mode to Work	Count	Percent
Works from home	950	21.9%
Walk	919	21.2%
Bike	99	2.3%
Auto/Van/Truck Driver	2167	49.9%
Bus / Public Transit	108	2.5%
Other, SPECIFY	99	2.3%
Total	4342	100.0%

NPEDC-62: Mode to School (Weighted)

Mode to School	Count	Percent
Bike	96	3.3%
Auto/Van/Truck Passenger	2531	87.8%
Bus / Public Transit	256	8.9%
Total	2883	100.0%

Appendix K: Data Distribution Policy

During the conduct of the study, NuStats assured respondents that all information they provided would be kept strictly confidential and that all of their responses would only be used in combination with those provided by other households in the study.

In order to maintain this assurance of confidentiality, as well as the integrity of our standing in the survey research industry, the following steps must be taken regarding data distribution:

1) The **final data set** should be kept on CD-ROM and locked in a secure location. This data set should serve as a back-up, in the event that the working and public use data sets become corrupted and require recreation.
2) The **working data set** should be released only as necessary to consultants assisting with the modeling process or to MassDOT/CTPS staff. All staff and consultants working with this data must sign confidentiality agreement.
3) The **public use data set** should be released only as necessary. However, the level of identification does permit this data set to serve as a public domain.

The final data set contains all variables as outlined in the original study documentation. To create the working data set from this file, the following actions must be taken:

- Modify the household file such that all home addresses have blank address fields (X/Y coordinates only).
- Modify the person file such that all school addresses and work addresses have blank name and address fields (X/Y coordinates only).
- Modify the place file such that all locations include only the X/Y Coordinates

In addition, the confidentiality agreement must be signed by all staff and consultants assisting with the analysis of the working data set. This confidentiality agreement meets the Council of American Survey Research Organizations (CASRO) requirements of confidentiality and is similar to that in use by the National Household Travel Survey.

CONFIDENTIALITY AGREEMENT
FOR THE USE OF THE
2010/2011 MTS WORKING DATA SET

I accept a copy of the 2010/2011 Massachusetts Travel Survey (MTS) Working Data Set.

I recognize that this version of the data set contains additional detail on individual records that could potentially compromise the confidentiality of the MTS respondents. I agree that I will use the working data set for statistical purposes only and will not attempt to identify any specific respondent. I agree that I will insure that no other data users in my organization will compromise the confidentiality of the MTS respondents, and that I will not share this version of the data with others outside the organization.

I also accept full responsibility for any misuse of this data, and agree to hold harmless the Massachusetts Department of Transportation (MassDOT), or any of their designated agents, from any damages resulting from such misuse, regardless of scope, severity, or intent.

I further agree that upon completion of my contractual agreement, I will return this data base to MassDOT (or their agent/designee) and delete any copies on computers or networks within my organization.

Signed:

Printed Name:

Date:

Name:

Firm Name:

Address:

Phone:

Fax:

E-mail: